The Builder.

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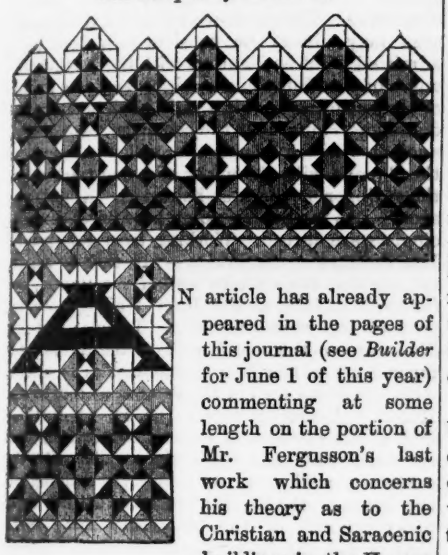
The Temples of the Jews.



AN article has already appeared in the pages of this journal (see *Builder* for June 1 of this year) commenting at some length on the portion of Mr. Fergusson's last work which concerns his theory as to the Christian and Saracenic buildings in the Haram area at Jerusalem, and which has given rise to some correspondence in our columns between the author of the book and some of those who regard his views on this subject with decided scepticism. But upon another portion of his book, and that which, in fact, gives to the volume its distinguishing title, "The Temples of the Jews," little or nothing has been said in our pages as yet, and it is due to the author that his elaborate effort (the first, so far as we know, that has been systematically made) to trace out the successive plans of the Jewish temples, and to arrive also at some conclusion in regard to the architectural style of the latest and most sumptuous Temple erected by Herod, should receive some special attention from us; so that we shall not be thought to be repeating ourselves in returning again to his book from another point of view.

We must premise, however, that an exhaustive critical examination into Mr. Fergusson's theories on this subject, as stated in his work, is what we are hardly attempting here. Such an examination could hardly be made within the compass of a review even of greater length than articles in our pages usually run to, nor without wearying our readers with *pros* and *cons.* as to the interpretation and collation of more or less obscure passages of description from the Biblical books, Josephus and other sources, the deductions from which could not be made intelligible without an extent of illustration which would almost amount to reproducing the book in our pages, and the original meanings of which are in many cases all but unintelligible from the very same cause,—the absence of any illustration; architectural plans being, above all things, the most difficult to realise from words only, and the most capable of almost endless latitude of interpretation. It must be observed also that while the subject of the Dome of the Rock, to which we devoted considerable space, deals with existing architectural remains, and with ascertainable facts in regard to architectural history and style, the portion of the book devoted to the subject of the Jewish temples is concerned almost entirely with buildings of which only a few of the most fragmentary vestiges, at best, remain, and is for the most part matter of pure theory, in regard to which one can come to no nearer conclusion than that one is more or less probable than another. But it will be useful here to give a sketch in brief of the course of reasoning pursued in Mr. Fergusson's pages, together with some critical estimate as to the bearing of his conclusions on some at present obscure passages in the history of architecture.

Mr. Fergusson's method of procedure has been to commence by restoring the first form of the Temple, the Tabernacle erected in the desert, and from this as a basis to endeavour to realise in turn the plans of the several temples of which we have record, down to that of Herod; and in doing this to collate the measurements and descriptions of the Bible, Josephus, and the Talmud, so as to make them, as far as may be, check and correct each other.

In considering the value of such evidence, he also lays, and rightly, a good deal of stress on considerations of architectural propriety and probability. When anything which to the architect is manifestly absurd occurs in a description, he must be allowed to reject, if he cannot explain it. "When, for instance, the text of Ezekiel, as it now stands, represents the cells surrounding the Temple as so constructed that neither light nor air could ever reach them, it may safely be concluded that this was not so, and that the text is either corrupt or, at present, unintelligible. In the same manner, when Josephus says these same cells were only five cubits square on plan, but twenty cubits in height, we may reject the statement as certainly erroneous." And no architectural critic, we imagine, will find fault with such a use of what may be called architectural common-sense as this.

The power of thinking-out and realising the actual practical conditions of a problem in building, which the author has frequently used with so much effect in his reconstructions of buildings which have been wholly or partially destroyed, is conspicuous in regard to his main point of difference from the popular idea of the Jewish tabernacle or movable temple which was the precursor of the building, as it has been accepted for the last 200 years, and duly added to the large pictorial Bibles which used to be among the necessary complement of a family library, especially in country houses. "According to their scheme, the tabernacle was a wooden box, 30 cubits long, by 10 cubits wide, and 10 cubits in height, open at one end, and roofed by curtains thrown across it like a pall over an open coffin. Yet such a restoration seems impossible: in the first place, because it does not accord with the description in the Book of Exodus, but more so because it is absolutely opposed to common sense. If any one will try, or even think, he will find that it is impossible to stretch a linen curtain across such an open space of 15 ft., without it sagging in the centre, so that every drop of rain that fell upon it must fall through, and heaping rams' skins and badger skins upon it (Exodus xx. 14) would only make it worse. Their weight, especially when wet, would only make it sag more, and they would act as sponges to retain any drops that might otherwise in a tempest be blown away and escape." Mr. Fergusson accordingly assumes as matter of course that the Tabernacle, being, in fact, simply a tent, must have had a ridge and sloping sides, according to the received way of contriving tents in almost all ages and countries. This is unquestionably the most probable supposition in itself; but the author admits a difficulty, viz.: that a ridge of 40 ft. in length must have had a ridge-pole to prevent it from sagging to an inconvenient and unsightly extent, and that a ridge-pole of such a length again absolutely presupposes at least two intermediate posts or props from the floor, of which no mention is made in the Biblical specification, though it appears intended to be as full as possible. This however, Mr. Fergusson regards as "one of the cases in which the constructive necessities of the building must be considered as supplying what the written authorities have omitted to mention"; and he adduces as a parallel case that of the Temple, which must have had pillars on its floor, since the roof could not be supported without them, though no distinct mention is made of them: "the writers seem to have taken for granted that every one knew that these supports were and must have been there, and as mere mechanical pieces of construction, they did not deem it necessary to include them in their description of the glories of the buildings." Now, we make no objection to this method of reasoning in itself; it is more probable, perhaps, that supports should be omitted in the description than that the structures should have been put up in an inherently defective manner of building: but we do feel inclined to warn Mr. Fergusson against a habit which he not unfrequently falls into, of arguing completely in a circle. He here says that the omission to mention the "story-posts" in the tabernacle is of no consequence, or is the less remarkable, because the temple building must equally have had supports internally, which also are not mentioned. But a few pages further on we find "None of those who have hitherto attempted to restore the temple have ventured to place pillars on its floor to support the roof. It is true they are not directly mentioned in any of the descriptions we generally refer to, but neither are the central pillars in the tabernacle, which must have been employed to support the ridge-pole of the structure."

Now, this really will not do: it is the most obvious arguing in a circle, and it is an oversight into which Mr. Fergusson has a great tendency to fall; after having propounded a theory as probable or even possible, he assumes it as proved, and then uses it to prove the very premisses upon which he built it. We have come across at least two instances of the same fallacy of argument in this book, of still more pronounced character; and though we admit it is an exceedingly common failing with archæologists, who have a habit of building up theories in a most wonderful way by arguments which are entirely inter-dependent, we are surprised to find a writer of so much common sense, and capable often of such close and logical reasoning, falling into this curious habit of manipulating theories to prove each other. Mr. Fergusson would do wisely to be more cautious in this respect, because one such lapse of logic, if it happens to come prominently forward, is often enough to prejudice a reader against the whole conclusions of a book, or, at least, very much to strengthen any scepticism which he may have had at the outset.

Apart from the question of the roofing, the description of the Tabernacle is remarkably plain and comprehensible; and, as Mr. Fergusson says, when that is obtained, it is not difficult to follow out the planning and arrangement of Solomon's Temple, which was manifestly based on the Tabernacle in its main points, only with its dimensions increased each way. The Holy of Holies in the Tabernacle was a cube of 10 cubits, and in the Temple became a cube of 20 cubits; the holy place (answering to the nave in a Christian church) was 20 cubits long by 10 wide in the Tabernacle, and double these dimensions in the Temple. "The total measurements are not, however, 40 by 80 cubits, as might at first sight be expected from this system [the totals of the Tabernacle being 20 by 40], but, in consequence of the necessary thickness of the walls in stone construction, 45 by 90 cubits." Something like this obviously would be the case; but the last-named measurements are not given or hinted in the account in the Book of Kings, from which the other measurements are given; and the passage forms an instance of the frequently-recurring habit of our author of mixing up facts and dimensions which are the result of his own conjecture, with those which are given from authentic sources, without any hint to the reader that they do not all stand on the same authority. In the present case it is of little consequence, as the thickness of the walls must obviously be taken into account; but we find the same method of writing in other passages in which it is really deceptive, so that the reader hardly knows, till he has made a separate investigation for himself, which are the facts given by the cited authorities and which are Mr. Fergusson's conjectural (occasionally *very* conjectural) deductions from them; and this we object to as not a fair way of writing.* To continue,—the position occupied by the verandah which surrounded the Tabernacle, Mr. Fergusson considers was occupied in the Temple by the small chambers (described 1 Kings vi. 5, 6), which he regards as in three stories surrounding the Temple, or what in a modern church would be the north, south, and east sides, and together equal to the whole height of the chancel ("Holy of Holies"), but overtopped by the nave, which rose above them, and had a "clearstory" above the roof of the upper range of chambers. The description of the chambers in the passage in the Book of Kings, cited just now, seems almost incapable of any other interpretation:—

Ver. 5.—"And against the wall of the house he built chambers round about, *against* the walls of the house round about, *both* of the temple and of the oracle: and he made chambers round about.

Ver. 6.—The nethermost chamber *was* five cubits broad, and the middle *was* six cubits broad, and the third *was* seven cubits broad: for without *in the wall* of the house he made narrowed rests round about, that *the beams* should not be fastened in the walls of the house."

In other words, the wall was set back each story to afford a bearing for the floor timbers of the cells or chambers. Even allowing for the words not found in the terse sentences of the Hebrew, and supplied in italics by our translators, the meaning of the description seems quite clear, and Mr. Fergusson's plan and section at least the most probable that could be given. The "clearstory" above the third tier of chambers he gets from the fourth verse of the same chapter, "and for the house he made windows with narrow lights," and as the expression translated "house" seems to be always applied to the nave, and there was a porch across the whole front, as well as the three tiers of chambers round the sides, it is difficult to see where these "lights" could come except as what we should now call a clearstory. The introduction of two rows of pillars or rather story-posts, to assist in carrying the roof, seems also consonant with the probability of the case. No direct description of such a feature is given, certainly; but it is unquestionable that cedar beams of 30 ft. bearing would be likely to require supports to prevent them from sagging; and the conclusion is ingenious which the author draws from the description of the temple-furniture, ten tables and ten candlesticks, five for one side of the house, and five for the other; certainly an indication that there were so many spaces or "bays." Mr. Fergusson also quotes in favour of this view the statement (1 Kings x. 12) that Solomon made pillars of almug trees for the house of the Lord; but here again we have to complain of the author's tendency to cite passages in such a manner as to suit his own argument; for this fact is not mentioned in connexion with the first description of the building of the temple at all, but in a later portion of the history where it is said (after the mention of the visit of the Queen of Sheba) that the navy of Hiram brought there trees from Ophir, and that of some of them Solomon made "pillars" for the house of the Lord; the marginal note of our translators suggesting "props" as another reading. The inference from this would be rather that they were subsequent additions. However, we think the pillars highly probable. But Mr. Fergusson's façade, with a staircase tower on either side of the "narthex," appears to be purely imaginative, and to have no real reason except that he thinks it would be better so, and that the façade must otherwise have wanted width and dignity, in which we quite agree. He considers the stairs were necessary to get to the upper chambers and to an upper room above the temple; but his stairs and turrets are far too important in size and position, and directly contradictory of the statement about the staircase (1 Kings vi. 8)—"The door for the middle chamber was in the right side" (marginal reading, "shoulder") "of the house: and they went up with winding stairs into the middle chamber, and out of the middle into the third." This indicates the stair as a subordinate feature on one side of the building, about as clearly as anything could do; and it is, to say the least, rather singular that the author entirely passes over this verse, so very explicitly expressed, but which would interfere very much with his arrangement of the stair-turrets in the main front. In short, all that we believe can be said about his idea of the façade is that it might have been something like what he shows, and might have had towers, but that there is not a shadow of evidence for them, and the indications of the narrative, so far as it bears upon the point at all, seem opposed to the idea. We should take it that the Temple was a building of which the architectural display was essentially internal rather than external,—a common characteristic of Eastern architecture; and that very probably the external front in Solomon's Temple (which, it must be remembered, was, as Mr. Fergusson himself points out, only an amplification of the original Tabernacle) had no very marked architectural character or dignity, the effect being concentrated on the interior.

It is unnecessary here to touch upon the intermediate stages of the Temple as rebuilt after the Jewish captivity, or the vision of Ezekiel in which what may be called a model specification for a temple is given in the language of prophetic mysticism. The latter is a purely imaginary ideal, and of the former Mr. Fergusson admits that we can know little or nothing. What has been said in regard to the Tabernacle and Solomon's Temple affords a sufficient preface for a few words in regard to the restoration of Herod's Temple, which forms the main object of this part of the book, and which is illustrated not only in this volume but in a drawing which has been hanging for the last three months in the architectural room of the Royal Academy.

It would hardly interest our readers if we were to attempt to go through all the various various arguments as to the precise size and situation of Herod's Temple in regard to plan; nor, indeed, could the multiplicity of views on the subject be properly sifted, or even adequately represented, consistently with our necessary limitations as to space. We may say that the main difference between Mr. Fergusson's view and most others that have been propounded as to the extent of the Temple site, is that he concentrates it within a smaller area than most other restorers, on a space nearly square, and about 600 ft. each way, in the south-west angle of the Haram area. His reasons for assuming this extent and position for the plan appear to us very strong, not to say almost conclusive. The south-west angle of the Haram area may almost be considered a fixed and admitted point as identical with the south-west angle of the Temple, since it is the only angle of the enclosure that is a right angle, and immediately adjoining it is the commencement of the ancient viaduct across the valley connecting the Temple with the upper city, and marked by the springer of the arch known as "Robinson's arch." As far as this point goes, most archæologists are agreed. Working from this point, Mr. Fergusson continues:—"If this is so, it follows that the western wall of the Haram, as far north at least as the Jews' Wailing-place, is part of the west wall of the Temple; and in like manner the south wall of the Haram, as far at least as the double gateway, is identical with the south wall of the Temple, as rebuilt by Herod. Assuming this to be so, we further find, at the distance of exactly 600 ft. from the southern wall, and perfectly parallel with it, a terrace wall now supporting the building of the Dome of the Rock, and above that the bare rocky summit of the hill, rising now, as it always did, 20 ft. or 21 ft. above the lower platform.

"In like manner, when we measure eastward from the western face of the Haram, at a distance a little less than 600 ft., the ground sinks suddenly, at the Triple Gateway, to a platform 40 ft., as before mentioned, below the level of the general surface of the intervening area. Between these two points we have a perfectly level area, measuring about 600 ft. each way; perfectly solid throughout, except where pierced by two tunnel gateways, the presence of which we are led to expect, and where it is hollowed out into cisterns, which we also know did exist under the arch of the Temple." Josephus describes the total area of the temple buildings as a square of 600 ft. each way, which is not very far from the size of this platform: and the extension of the Temple further eastward seems, at all events, out of the question, since the ground is only made up even to its present level at the south-eastern part of the Haram artificially, by vaults, which appear to be of later date, and which, in any case, are not spaced or built so as to support the piers of a great building over them.* That the building was, at all events, approximately a square can hardly be questioned, even if Josephus's precise measurements are regarded as the result of a love of round numbers and symmetrical ratios; and its obvious limitation in the eastern direction, counting from the angle by Robinson's arch, seems therefore to infer a corresponding limitation in the northerly direction. This question of the site and extent of the Temple, it may be here mentioned, has an important bearing upon the question of the origin of the Dome of the Rock to which so much reference has been made in the *Builder* lately; because the supposition of those who deny Mr. Fergusson's views as to the origin of that building is, that the Sakrah, the sacred rock over which it is built, was originally invested with importance in the eyes of the Mahommedans as being the site of the altar of the one true God under the Jewish dispensation, and therefore naturally an object of reverence to those who were opposing Monotheism to

* We could give a number of examples of this; one other will suffice: we have an engraving (p. 163) with the title, "Portion of the Lid of Herod's Sarcophagus (from a drawing by De Saulcy)." Any one reading the title would, of course, suppose that this was an object which by general consent was recognised as what it is here described to be; but he will find that De Saulcy, from whom the drawing is taken, "strangely mistook" it for that of one of the early kings of Judah; and even the author himself can only say that "if the theory is correct" that the tomb from which it was taken was the Herodian family sepulchre, then it "hardly admits of doubt" that this was the lid of a sarcophagus fashioned by Herod to contain his own remains. So that there are two conjectural stages to be passed in arriving at the assumed conclusion as to its being Herod's sarcophagus; and as the ornament on this lid is one of the chief authorities for the restoration of the detail of Herod's temple, we begin to think there should be a little more certainty before it is engraved and labelled in this way.

* See Mr. Fergusson's diagram and note on page 75, which, assuming that the facts are correctly represented, appear conclusive as against Mr. Warren's theory of the position of the Stoa Basilica over these vaults.

Christianity. Now, if the south wall of the Haram area is recognised as identical with the south wall of the Temple, as, according to Mr. Fergusson's theory, it must be, no theory of the plan and extent of the Temple at all consistent with existing accounts can extend it so far north as to take in the Sakrah in its present position as the site of the altar. That part of the controversy must now be left to those who have taken it up by expressing their personal views in our columns; we merely notice here the bearing of the one part of the subject upon the other. Of Mr. Fergusson's plan of the Temple in detail, we will only say here that it seems in the main to fulfil, in a degree unusual in such restorations, the combined conditions of architectural effectiveness with probability in regard to the relation of its parts to each other and to the peculiarities of the site: nearer than mere probability it is utterly impossible for any one to arrive, in spite of the author's very confident observations in the conclusion (p. 105) of his chapter on the plan, in regard to a building which was utterly destroyed centuries ago. But in regard to its general style architecturally, something more definite may, perhaps, be said by the help of comparison with existing remains of Eastern architecture.

The plan of the actual Temple of Herod,—the Temple proper,—considered apart from the surrounding courtyards and apartments, as given by Mr. Fergusson, is very nearly the same with that which he gives of Solomon's Temple, only on a larger scale, and with somewhat more elaborate architectural ordinance; *e.g.*, an open colonnade running in front of the rows of chambers on each story. The most important difference is that the entrance façade, with its flanking towers, is spread much further beyond the width of the main building, which, in the perspective view (*Frontispiece*), seems quite subordinate to the front, and produces rather the effect of a modern railway-station building with a hotel in front. The expression quoted from the Middoth (p. 131), "that the sanctuary was narrow behind and broad in front, like a lion" (a singular but very suggestive simile), conveys the idea, however, that the proportion between front and rear was something like this. As to the architectural restoration of the exterior generally, we, for our part, can only regard it as for the most part pure conjecture, with more or less probability in regard to some of the details. The author admits that in regard to the height, so contradictory and improbable are many of the statements, that "any one might feel justified in rejecting them altogether, and assuming that a restoration is impossible from existing data. . . . . Still, I believe that the general dimensions and appearance of this celebrated building can be made out with fairly approximate certainty. At all events, it is well worth trying to do so; for its interest is unsurpassed by that of any building in the world; and if it can be done, a restoration of it settles many curious problems which have occupied inquirers for a long time past."

As to the interest of the inquiry in itself, there can hardly be two opinions; but really, as to the idea of even "approximate certainty" being attained, or of architectural problems being settled, by a process built upon such conflicting and imperfect testimony, we must remain sceptical. It would be possible, we must think, to make a drawing which would come as near to satisfy all the positive indications of the architecture of Herod's Temple which can be collected, as this one of Mr. Fergusson's, and which would have so different an effect that no one would ever suspect it was meant for the same thing. The author admits that the result has been a surprise to himself, and we imagine it has been equally so to a good many of his readers, for it is certainly not a very beautiful structure; nor can we see anything very satisfactory in this process of evolving lost buildings from the inner consciousness of even the most learned architectural critic. It is quite a different thing from restoring buildings of which the ruins remain in sufficient preservation to give a clue to plan and detail. There is, however, some interest and suggestiveness in the consideration of the reasons which have led to some of the details adopted in this restoration.

The elevation and perspective view on the frontispiece and plate III. show a building of what may be described as most resembling a rather impure and florid Italian Renaissance style, with pilasters on two stories and columns (with angle pilasters) on the third; over this last story rise low square towers with pyramidal roofs at the angles, which serve to stop the ridge and high-pitched roof running across the central portion of the façade. The upper (columnar) story between the towers is an open loggia, for the existence of which a reason is given, founded on the description of the last retreat of the priests to the upper part of the building, where they held out for some days, while the Roman soldiers had already got possession of the sanctuary. The description of Josephus as to their place of retreat might undoubtedly mean such a loggia as this, and might also be susceptible of half a dozen different interpretations.* A much better ground for the loggia, and even for the general shape of the façade, seems to be furnished by the engraving given (p. 139) from De Vogüé, of a typical form of church existing in Syria, which, indeed, seems to us to have been at the root of a good deal of Mr. Fergusson's restoration of Herod's façade; and it may be taken for granted that his building, however exceptionally rich and costly, would not have stood alone in its general design, but would have had, like all other specimens of ancient architecture, its close relations with existing models in the same country, of which this church at Tourmanim seems to be a reminiscence. The reason given for the high-pitched roof is a curious and surely quite insufficient one. It is founded on the statement of Josephus that spikes were placed on the roof of the temple to prevent birds from settling on it, and the author urges that it would be impossible to spike a flat roof so as to attain this object, and that the roofs must have been made steep enough to prevent birds from settling on the slope, and then have been spiked at the ridge and parapet with the object named. The roofs would have to be steeper than they are shown to attain this object; and it certainly appears a very small basis on which to erect a high-pitched roof in the absence of any direct testimony as to such a roof; though we admit that some colour is given to the theory by the shape of the rock-cut "Tomb of Zacharias" given on page 142,—a cubical design with an Ionic order, and a square pyramid for a finish above the cornice. The pilasters and panels of the Temple are shown profusely decorated with carved foliage, intended as ornament derived from the vine. And here we come upon a really interesting point; for the existence of a style of architectural ornament at this period in which the vine was predominant seems unquestionable, and is entirely in keeping with what we know of the sanctity and symbolical meaning attached to the vine by the Jews. The interesting relic called by Mr. Fergusson the "lid of Herod's sarcophagus" (before alluded to), though we objected to the reader being asked to accept that title for it *sans phrase*, must be recognised as of about the date of the Temple (owing to the character of the tomb in which it was found), and is a most probable representation of the style of ornament which may be supposed to have been carried out in the Temple. The existing remains of the carved ceiling of the Huldah gateway, also adduced by Mr. Fergusson in evidence, form a corroborative testimony in favour of the style of detail suggested. The author also lays some stress on the style of the remains of synagogues in the Tiberiad, discovered of late by the Palestine Exploration Society, one of which was illustrated in the *Builder* for May 18 of this year; though, of course, the evidence of these remains is only reflex, in so far as they may be supposed to have been reminiscences of the Temple, as they are of later date than that of its destruction; nor, indeed, can we see that any application of their characteristic detail is made in the author's Temple façade. An illustration much more directly to the point is furnished by the remains of the temple at Baalzamin, some details of which are given (on page 141) from De Vogüé's "Syrie Centrale," and which is of the same date as the Jerusalem Temple (the name of Herod being mentioned in the inscriptions), and entirely confirms the evidence of the sarcophagus-lid before named in regard to the nature and style of the ornament. From this building the author also obtains a hint for the bases of the columns, which nearly resemble inverted Classic capitals.†

* The expression of Josephus is merely that the priests took refuge "on the wall" (ἐπὶ τὸν τοῖχον), which he describes as eight cubits broad. So vague an expression may mean almost anything.

† Some of our readers may remember that this peculiar form of base was used in the carefully-studied architecture of Mr. Rivière's picture of "Lazarus at the Rich Man's Gate," in the Royal Academy exhibition of last year.

But the most noteworthy and interesting feature in the detail of Mr. Fergusson's façade is his interpretation of the vine-bearing gate of the Temple, and the manner in which he connects it on the one hand with the erection placed by Solomon before his Temple, and described in the Bible as two pillars, which he called Jachin and Boaz, and on the other hand with features in religious architecture so far remote as Japan and India. No student of architectural history who has realised how frequently the traces of a common origin are to be found in architectural remains far remote from each other (more especially in that which is concerned with religious symbolism) will be in any way startled at such a suggestion. Mr. Fergusson first suggests, in speaking of Solomon's Temple, that the description of the two pillars with their enormous and elaborate capitals ("chapiters" as the English version has it), upon which it seems impossible to crowd all the detail that is described if we imagined them as capitals of columns in the ordinary acceptation of the term, would involve an absurdity if we tried to design them in literal accordance with the description; nor is there anything in religious architecture quite analogous to these two supposed pillars of bronze with such extravagant capitals. But Mr. Fergusson finds something analogous in the *Toran* which stands in front of Japanese temples, and consists of cross-beams supported by two pillars of granite, beneath which the worshipper must pass in entering if if he wishes his prayers to be heard; and in the gates of the Indian topes, consisting of several cross-beams, carried by two pillars or uprights. Taking this hint, he represents the Jachin and Boaz of Solomon's Temple as supporting two cross-pieces or open-work beams on which would be arranged the various ornaments described in the account in 1 Kings vii., the "nets of checker-work and wreaths of chain-work" with which the chapiters were adorned. "Any one," adds the author, "who has been in the East, and knows how frequent these torans are in front of the doorways of temples from India to Japan, would rather look for, and expect to find, something of the sort at Jerusalem." When we come to Herod's Temple, it seems that the description in the Talmud actually gives the number and measurements of certain beams over the entrance,—"The gates of the propylon were 40 cubits in height and 20 cubits broad, and above these were five richly-carved beams of ash or oak. The lowest of these extended one cubit either way beyond the pillars of the doorway, while the one next above this was one cubit longer either way than that below it, so that the upper beam of all extended to 30 cubits." The description adds, "Between each beam there was a row or course of stones," but the beams as here described could hardly have been built into the wall: Mr. Fergusson apparently takes the stones as supports at intervals between the beams, in the form of transverse beams tying the larger ones into the wall. Over this framework of timber the branches and fruits of the sacred vine are trained. The restoration of this feature, given, in accordance with the above hypothesis, on p. 155, seems to us the best and most consistent bit of restoration in the book, and the one most decidedly consonant to probability and architectural fitness. One other interesting suggestion we must notice: the erection over the entrance of the Sanchi Tope, which is engraved as the parallel of the feature in the Jerusalem Temple, is, from its carvings, obviously devoted to, or symbolical of, tree-worship; "whether this has or has not any affinity with the honour paid to the vine at Jerusalem is a question others must determine."

We have given but a very condensed indication of the gist of the treatise under notice, which is one full of interest, whether the reader be inclined to accept or to demur to the conclusions of its author.

Monument to John Mackenzie. — The movement originated by the *Celtic Magazine* to erect a public monument to John Mackenzie, compiler and editor of the "Beauties of Gaelic Poetry," has so succeeded that the monument is about to be erected in Gairloch. The monument is in the form of an obelisk of Aberdeen granite, 13 ft. 6 in. high, and the site chosen for it is a projecting rock outside the churchyard and overlooking the grave. It bears both Gaelic and English inscriptions. The monument has been executed by Messrs. Robertson & Law, Inverness.

EXCAVATIONS AND PUBLICATIONS.

ENGLISH AND FRENCH.

THE first issue of text and plates is now before us, towards what promises to be a work of equal interest and importance,—"Miletus and the Latmian Gulf," by MM. Olivier Rayet and Albert Thomas. The Latmian Gulf itself is a thing of the past, and has shared the fate which was already proverbial in antiquity respecting the city of Miletus, mother of so many and such important colonies for which it once provided a port. "Miletus had a vogue in days gone by," —was the purport of the sarcastic iambic line. In those days the gulf deeply indented the western coast of Asia Minor, immediately to the south of the mountainous promontory that curved northwards to embrace the wider bay of Ephesus. What the Cayster has done for Ephesus on its site, the Mæander winding its way through a vast plain with steep and friable land around it, has done far more liberally,—more severely, —for Priene and Miletus that once faced each other as maritime cities at its northern and southern margins, for Heraclea and Myous at its nearer and more remote recesses. The extremity of the gulf where it narrowed southwards is now cut off as a lake; and the Mæander, with windings still more exaggerated than those which the ancient cities on its banks symbolised on their coins, now finds its way to the sea at a distance of several miles from what was its embouchure in the days of Herodotus. Ports and roadsteads are gone, small islands show as moderate hills in a flat district of which only a part is cultivated, part is a marsh always, and part invariably flooded during winter months. Herodotus was well aware of what was going on and had been, and he illustrated the formation of the Egyptian delta for his countrymen, as well by the accumulations of the Scamander, which had increased the distance of Troy from the coast, as by those which had extended the plain of the Mæander. So the traveller must now go inland if he would study the geographical conditions of the battle of Mycale on the coast by Priene, that decided the political relations of Europe and Asia at a most important epoch; and he must take time into his account as well as space when he collates the descriptions and enumerations of towns and localities by Strabo, Pliny, and Pausanias.

The excavations and archæological inquiries which led to this publication were originated, and the cost of them defrayed, by the Barons G. and E. de Rothschild,—a worthy example it might be said, if justice to some predecessors who were also at work concurrently did not require us rather to say in most praiseworthy emulation of a worthy example. The publication of results is under the auspices, which presumably implies at the charge, of the Ministry "de l'Instruction Publique et des Beaux-Arts." What more this implies than the subscription by the State, in itself most liberal for fifty copies of an expensive work (200 francs the copy), we are not aware. When the text which appears in quarto form is complete, an account is promised, in two volumes, of nearly all that is known, and of most that is likely to be, of Miletus in the first place, and then of Priene, Tralles, Magnesia on the Mæander, Myous, and Heraclea; the agora of Heraclea is especially indicated as sharing with the enormous temple of Didymean Apollo at Miletus in artistic and archæological interest and importance.

The first part of the first volume, now delivered, gives a general study of the river Mæander and its environs, and then a detailed history of Tralles in both Greek and Roman times; so detailed, indeed, that unless the anticipated limits of the work prove elastic, some more important cities will be cut down, we cannot but fear, to disproportionate brevity. Besides the description of the present state of ruins,—of works of excavation,—of elaborate restorations, among them,—may it not be too daringly precise,—that of the Didymæan Temple, which has already obtained the medal of the *salon*,—we are promised more than 150 new inscriptions, and a wealth of numismatic reproductions, with descriptive catalogue. The sculpture which was discovered by the expedition has been presented by MM. de Rothschild to France, and is now to be seen at the Louvre by those who are unexhausted by other demands upon the energy and time of the studious of exhibitions.

The atlas at present delivered,—the first of eight *livraisons*,—contains ten plates, including two maps of the Latmian Gulf and parts adjacent, ancient,—with successive variations of coast line marked,—and modern. The magnificent archaic bronze of Didymean Apollo in the Louvre is represented in heliography, and another plate reproduces a marble lion found at the Necropolis of Miletus, which compares with that in our Museum from Cnidus. This pair, it must be said, considered along with what remains of the Lion of Chæronea, goes far to prove that the Greeks,—as masterly as are many of the lion-heads which they have left us,—never attained,—it may be from a lack of models, —to a true feeling for the general "points" of the king of beasts.

The other plates, we confess, take us a little by surprise, as they are without reference to the text along with which they are put before the world. They are views, plans and sections, and restorations of the Temple of Athene Polias at Priene. The title-page bears the note, "All rights reserved"; and our first movement is one of regret that it was not supplemented by another, "All rights respected." However, the case is one, perhaps, that may better be made one for amusement or indulgence than for indignation, as long as its true bearings are not mistaken. The advertisement of the work contains the intimation that "the attention of MM. Rayet and Thomas was particularly attracted by the admirable Temple of Priene, uncovered eight years ago by Mr. Pullan, and on the subject of which that able investigator has not produced any publication." This is probably an example of a class of cases in which it would not be for the interest of the world that "architectural copyright" should be too strictly insisted on. Many more than eight years ago the French themselves undertook, at State expense, the excavation of the temple at Magnesia, on the Mæander, —a work which cost the life of, at least, one of the conductors of the expedition; but no publication of results has followed to this day, and some inquiry at several times has failed to elicit information as to what became of the drawings. If some later independent adventurers had bestowed labour upon the site already cleared to their hands, and even been in a hurry to publish what they found, the world would have been richer by knowledge which it may now be too late to recover. As regards Priene, however, Mr. Pullan's drawings have been not only in safe-keeping, but in steady if leisurely advance to publication. Otherwise than leisurely they scarcely could be. The expedition to Priene was only one of several, to carry through which the Society of Dilettanti made considerable efforts on the distinct anticipation of the progressive destruction which Greek remains in Asia Minor were being subjected to, and also of the uncertainty, from the precarious state of Turkish politics, how long firmans might be obtainable or excavations be possible at all, either with firmans or without. It seemed desirable to secure the drawings and measurements at all costs first, and then in due time publish. Publications that are to follow worthily Mr. Penrose's classical work on the Parthenon, promoted by the same society, are not affairs of brief gestation by private societies. However, it is but courtesy to assume that the artists commissioned by MM. de Rothschild, were not aware how far advanced are the plates of the English society, and that it is due to the accident of these particular plates of their own being the first finished, and to no thought of forestalling in interest those to whom they were indebted for their opportunities, that they appear in anticipation of their own illustrating text.

As regards the plates themselves, they leave nothing to desire in elegance and finish; as regards their scientific value,—and this is a point of view which, from the advance which has been made in the recovery of the theory of the best Greek architects, is all important,—not quite so much can be said. The dimensions are not inserted in the plates of details, but have to be recovered by application of compasses to scales,—*periculosæ plenum opus aleæ*. Where such exactness is in question as is demanded in the determination of the proportions of first-class Greek work, there is no safety but in the recorded measurements being provided to check the vagaries and lapses of the engraver, as well as the variable expansion of paper in the processes of printing. The plate, again, which exhibits professedly the actual state of the ruined plan, would indicate that various interesting dimensions were obtainable, which are not supplied, and it leaves us to obtain some others by additions or subtractions that always involve liability, or what is almost as troublesome, apprehension of error through unaccounted fractions. We plead then now, as always, for the insertion of as many original measurements of the actual remains as possible, and for the warning correction of extensive through-measurements and joint measurements, the true security against those errors which will creep into measurements of dislocated and disturbed remains: the security which we thus gain is a satisfactory limit of the errors that can be allowed for intermediately.

Our last words cannot be other than those of hopefulness, nay of congratulation, at the prospect of the completed work being a valuable addition to that library of classical architecture and archæology which is preserving for posterity the best records that can be recovered of the great,—must we still, and always add,—unfortunate people, to whom the world owes its start and its standard in the noble pursuit of refined and embellished—in fact, of civilised life.

PICTURES AND FRAMES.

THE TURNER DRAWINGS.

IT would be difficult to find in the world of fine art an institution of more import than the National Gallery of Pictures. It is a something that in great measure stands quite apart, and shows evidence of work in a way peculiar to itself. Much as has been written and thought out on the subject of art, and on methods of work, there yet remains a good deal more to be said, and, what is more, a good deal more to be yet thought out and analysed. This National collection of paintings has been got together, as all know, more by lucky accident than through any deep thinking about it, or with any design of forming a history of painting as a fine art, or of showing successive methods and ways of work. This is, perhaps, but a poor account to give of it, but, looking at the things about us, there is much to be thankful for, and to be proud of, and certainly much to be learnt from what there actually is before us in Trafalgar-square. Broadly and generally stated, it is a vast collection of the artistic individualities of the several authors of the works on its walls,—of their individual powers of *hand* and *mind*, through the media of brush and colours,—a wonder to each artist himself, and each work a wonder to those who intelligently look at them. How must the great Titian have wondered at his own power over the colours he used, the very same that others about him had!

How strange a sight it would be, in these correct days, to see one of the old painters, as Veronese, at work,—to see the roughness of his matter-of-fact surroundings, the comparative coarseness of his materials, and, more than all else, perhaps at the simple state of mind in which he went to his work. There could have been no science present, in our advanced acceptation of the word, no grand "principles" to go by, and certainly, in the majority of cases, no "precedent" to guide. Each man must have looked solely to himself, and may be not a little puzzled to find his way, or to see, however dimly, what there was before him. Most o the mighty masters of drawing and painting, in whatever age or country they lived, got all their materials from the things and life about them. Whatever the subject may have been which they were "illustrating," to use a common and accepted modern phrase, they but looked to and at the life and ways of life, and to the things about them, for the material objects from and out of which to compose their pictures; and it was done, as we may in our Gallery see, in a plain and matter-of-fact way, which would hardly pass muster, it is to be feared, in these academical days, so simple were the painters in their way of work. We might find a something, too, in the sight of their colours, brushes, paint-boxes, and at the painters' gear generally; just, indeed, as we may find a special interest in Turner's "colour-box" and palette, now exhibiting in Bond-street with so many of his best works.

Our more immediate object in now calling a moment's attention to the National Gallery collection of paintings, and to the pictures and drawings of Turner, which Mr. Ruskin has put for a time within public view, is the singularly uncomfortable way in which the pictures are hung, and the small and inconvenient rooms in which they are exhibited. In the very small room in Bond-street, all so crowded up in the centre with screens, and even a huge iron safe, it is all but impossible to get sight of the pictures at all. It is, indeed, a pity that it should

be so, for almost any popular exhibition of mere toys would meet with better treatment. All pictures need not only their necessary space on the wall, but a certain ground-floor space in front of them, so that they may be seen at some convenient distance from the eye,—at least, at first,—the spectator after a while getting closer to the picture for details and more minute examination. In the small Turner Room this is impossible; and in the National Gallery itself it is with the large pictures but little better. It is a something to get a picture at all; but when got it is surely worth its mere wall and its floor space! We can hardly imagine anything more instructive to the art student than this series of Turner drawings and paintings, showing as they do to great extent his way of work, and his progress from beginning to final completion. They should, then, be so exhibited as to be fairly and comfortably seen.

Again, if we dared regard it but for a moment in this light, and look on these paintings as things quite *per se*, we might feel a little surprised at the way in which each picture is considered and exhibited as a "piece of furniture," surrounded, as so very many of them are, by huge vulgar gilt frames, covered with unmeaning ornament and putty enrichments. So *wide* in the National Gallery are some of these attractive frames that they all but eclipse the very pictures they enclose, and it would almost seem that the frame being made first, the picture was ordered to be painted afterwards for the mere purpose of filling up the vacant space in it. We could value some of these pictures with a quite insignificant number of superficial square inches when compared with the space taken up by the gorgeous gilt frames surrounding them. Would it not be easy to remedy this, and thus to look at the picture first, and the frame afterwards, or not at all? Indeed, may we not say that the smaller paintings and drawings are killed all but outright by their wide heavy frames? Nay, the gilding alone, with bright lights on it, puts out in some cases the artist's work altogether.

There is another matter worth considering. We refer to the colouring of the walls of the rooms or galleries. The main object of a gallery specially built to contain and exhibit pictures or paintings is surely and simply to leave the picture or painting, and allow it to tell its own tale, and to make its own simple, sole, and real impression on the mind of the observer and student. The more simple and unobtrusive the room, the better for the painting and the painter, and there can, we think, be no doubt,—and certainly no artist will dispute it,—that the colour of the wall on which the painting is seen should be such as not in any way to obtrude itself on the eye, and take its attention in the smallest degree from the painted canvas before it. A very simple and easy experiment will soon convince any one of the difference produced by a change in the colour of the background in and against which a picture is seen.

By the way of special example, and to realise our position to the artist reader, for it is to such here, in the first place, we would chiefly address ourselves,—we would point to the world-famous National Gallery picture the "Consecration of St. Nicholas," by Paul Veronese. We need not attempt any description of it, well known as it is, or ought to be, but will only say that it fully illustrates what we desire to here enforce—the self-sufficiency of the picture as *painting*, and as an idea to tell the mind's eye; and that while the mental impression of such work lasts, nothing ought to come in its way, or to mar it, whether it be an over-impressive and ponderous frame, or the "walling,"—to use a general but descriptive word,—of the room in which it is hung up. This fine work of Paul Veronese needs most surely no accessories to engage the thoughts and interest of the student. It is enough, and more than enough in itself, and the first lesson to learn in the Gallery is to see this, and to wish for nought else. Nothing can well surpass the magnificence of the mere *painting*, the work of the brush, here; and well might old Venice be proud of her painters, when but one of them could do such work as this. We once saw this very picture out of its awkward frame, and on a rough wooden stand in the middle of the room for the purpose of being the better copied by some ambitious student; and it is the keen remembrance of it, as we then saw it, which makes us the more regret its present surroundings.

We call attention to this important matter of picture displays, from the very fact of their growing importance, as evidenced by the interest taken in the Turner collection in the Bond-street-rooms. As a guide and inspiration to the student, this historical series, as collected and arranged by Mr. Ruskin, is hardly to be sufficiently estimated. It shows the artist when he begins his work and when he is at his best and highest, and it shows, too, what it is to interpret nature, and how much is lost and gained in the process. We cannot but think that no more useful and instructive introduction, if we may use the phrase, to the study of the landscape painting in the National Gallery, by its different masters, could be, than a visit and a long visit, to this open book of Turner's. We would begin with the pencil outlines and the few plates,—too few, perhaps,—from the "Liber Studiorum," awkwardly placed, as they are all but on the very floor of the narrow room, and then go finally to the more completely-developed, though not better, examples and proofs of the great landscape-painter's powers of mind, and eye, and hand. It is really a most wonderful and mighty show of high-art power, and should be carefully and thoughtfully read through and through, again and again, by the student who is thoroughly in earnest, and means real work.

THE STORY OF AN OLD BRIDGE.

FRANKFORT-ON-THE-MAINE.

THE Old Bridge over the Maine at Frankfort is one of the most curiously interesting structures of its kind in Germany, and though not the oldest of its class, nor so rich in statues as the famous one over the Moldau at Prague, its known history, together with that of its predecessors on the same spot, takes us back to the days of Charlemagne. In general appearance it is not so antiquated as it really is, and many of its old and distinguishing characteristics have long since disappeared. The watch-towers which formerly stood at either end, with their frescoes and images of the Madonna, have long been forgotten; the houses and chapels which may be seen on the oldest pictures of the bridge disappeared with the so-called Dark Ages. The mills that are beneath it may trace their origin far back; but they have been renovated to such an extent that their antiquarian interest is lost. Yet there is much left of ancient date to interest us. There are curious and rude sculptures over the doorways leading down to the mills; and on the opposite side, a crucifix surmounted by a gilded rooster, whose joint history leads us back some 500 years, and about which legend delightfully clings. Then there is the red sandstone monument of Charlemagne, looking Rhinewards, holding in one hand the imperial apple, and in the other the imperial sword; a recent creation,—indeed, erected in the year 1843, in commemoration of the thousand years' existence of the German empire. Goethe called this bridge the only ancient structure of importance in Frankfort.

It is a bridge to which historical events cling, and events connected with the lives of some of Germany's great men. It is also a pleasant bridge to stand on. Beneath us the waters of the Maine rush on as if in haste to greet the nobler flood of the Rhine, bearing the slender woodrafts from the Spessart, and the shallow boats laden with wood and fruit and produce of Bavaria to the busy city of bankers. On one side of the river is the quaint old suburb of Sachsenhausen, backed in spring-time with its rare fringe of apple blossoms. On its course the waters wash the foot of an ancient wall which historians tell us bounded the garden where Charlemagne loved to sit and quaff beer or meth, or whatever the Germans imbibed in those days. Schiller once stood on this old bridge in a gloomy state of mind, and perhaps contemplated suicide by casting himself into the flood, for he asked in his despair as he gazed in silence on the river, "Which is the deeper; that water or my suffering?" The young poet was then fleeing from his Stuttgart and Mannheim difficulties.

Of Goethe also arise, as we stand on the bridge, pleasant memories, of which he tells us in "Truth and Fiction," and which Bettina does not forget to gossip to us about. "Das Kind" writes to Goethe: "This and the following story (told me by the Frau Rath) made the most lively impression upon me. I see you before me in the full splendour of your youth. On a bright winter's day, when your mother had company, you proposed to her a drive with the strangers along the Maine. "I put on my scarlet fur cloak (your mother said), to which was a long train, and fastened down the front with gold clasps. My son was shooting like an arrow between the other skaters: the air had made his cheeks glow, and the powder had flown out of his hair. As soon as he saw the scarlet cloak he came up to the coach and smiled quite kindly at me. 'Now what do you want?' I said. 'Come, mother, you are not cold in the carriage, give me your velvet cloak.' 'Why you won't put it on.' 'But I will, though.' I pulled off my beautiful warm cloak; he put it on, swung the train over his arm, and he sailed away like the son of a divinity along the ice. Had you but seen him, Bettina! Anything so beautiful is not to be seen again! I always have him before my eyes, how he glided out of one arch and under another, and how the wind filled out the long train behind him."

The bridge has many legendary memories. The gilded rooster on the crucifix could tell us much of history if so it chose: of wars and pilgrimages, of floods and tournaments, of ice festivals and persecutions of the Jews. For five hundred years has this gilded rooster, or its predecessors in office, occupied tutelar honours on the bridge. It has seen the brilliant retinues and *cortèges* pass over on the way to the imperial coronation; it has seen the long cavalcades of soldiers pass and repass; it has seen the convoys of merchants coming in to the great semi-annual fairs; seen Germans, Swedes, Austrians, and French struggle for mastery beneath it, and is silent of all. Indeed, it is rather a mysterious bird. The boatmen think it was placed there to point out the deep current for their vessels, but the antiquary thinks it was perched there on purpose to defy him in his researches as to its why and wherefore. But legend has given the bird immortality, and a certain importance in the history of the bridge which we cannot overlook.

The story goes that the contractor found that he was unable to complete the structure within the specified time, and, fearing the consequences, he prayed to the Devil for aid in his emergency; for in the good old times of which we speak, Satanus was a personage of authority, and much sought after in times of need. The Devil, as we know, seldom leaves his friends in the lurch, and he promised to help the bridgemaker out of his difficulties on one condition. He would aid in finishing the bridge by the appointed time, and as his reward he simply claimed that the first living creature which should pass over the completed structure should belong to him. The Devil drew up the contract, and the contractor signed it with his own blood, as was customary in such contracts. On the appointed day the bridge was completed, and the Devil wanted his pay. But this time the "old familiar gentleman" found that the contractor had proved too many for him, for, instead of permitting any good Frankfort citizen to first pass over the bridge and lose his life and soul, he caused to be driven over before him a live rooster, and thus cheated the Devil out of his pay. The Devil was, of course, very angry at having made a contract so indistinctly worded,—so angry, indeed, that after tearing the innocent bird to shreds, he partly destroyed the completed work, shaking the central arch till it gave way; and it is just possible he would have destroyed the bridge entirely had not the clergy taken the precaution to institute a solemn procession, and consecrate the structure on the following day. Thus Satan was deprived of all further power over the bridge. Legend has here simply woven together a number of historical incidents connected with the bridge in her own quaint manner, mixing up truth and fiction, conjecture and traditions.

The present bridge dates only so far back as the year 1342, although it had predecessors of stone and wood dating some centuries earlier. Batton says that Charlemagne built a wooden bridge here. Historical mention of a bridge, however, is first met with in 1035, and again in 1192; then it was of wood; it was rebuilt in stone in 1276. This lasted until 1306, when, together with the towers, it was almost completely destroyed during a violent flood. It was then rebuilt stronger, the money for the purpose being collected from the sale of certain indulgences by the Church. The building of bridges was considered to be in those days a religious work, like the building of churches, because they aided the spreading of the gospel, and enabled the pilgrims to Rome and Jerusalem to perform their journeys with greater ease. In 1342 a violent flood tore down the tower on the Sachsenhausen side, and nearly destroyed

the bridge. The present structure dates from this period, though it was not finished until the year 1419. In the middle there were two places left unarched, and simply covered up with boards that could be easily removed in case of hostile approach. The two places were only walled over in 1840. Thus the Devil's wrath turns out to be after all simply human strategy.

The bridge was an interesting structure in those days. Besides the towers at either end, on which were on the one a crucifix and an insulting fresco directed against the Jews, and on the other an image of the Madonna and a box for the reception of donations towards keeping the bridge in repair, there were two mills, built about 1410, which may be seen to this day in newer shape. There were also a small chapel or sanctuary, and a little structure styled the Rat-house; and somewhere there were two secret chambers,—the one for men, the other for women,—probably condemned criminals who were here cast into the Maine; and, finally, there was, and is still, the crucifix with the gilded rooster. The passers-by were warned by an inscription, and a rude carving representing a hand hewn through by a hatchet, that the bridge was sacred in character,—"*Wer dieser Brücken Freiheit bricht, Dem wird sein frevelnd Hand gericht,*—"Whoever abuses the freedom of this bridge shall forfeit his hand as a punishment." No beating was permitted on the bridge. In case of a *mêlée*, and the beating caused bleeding, the aggressor should lose his hand,—a common mode of punishment in those times. The Jews were, in all probability, the greatest gainers by this "freedom," though they were subjected to deep insult every time they gazed on a wretched fresco on the Sachsenhausen Tower, a drawing of which may be found in the "Antiquarian des Mainstromes." The little chapel on the bridge was dedicated to St. Catherine. Sometimes, during excessively rainy seasons, the citizens feared greatly for their bridge. In January of the year 1374 the city fathers promised to pay for forty masses if the bridge were spared. This method proved successful, and was again resorted to in the following year. The Rat-house on the bridge was used for a very curious purpose. It was built in 1498, and in it from this year to 1557 every afternoon a converted Jew stood and doled out a heller (farthing) for every dead rat brought to him by the city youth. After cutting off the tails, to keep as a voucher for the money entrusted to him, he cast the bodies into the river. In the year 1498 1,080 rats were thus disposed of. The money employed in this warfare against the rats was taken out of the fines paid by the Jews. In 1569 the Rat-house was transformed into a place for the storing of powder.

The story of the gilded rooster which surmounts the crucifix is of some cultural interest. Historically, the bird is a well-authenticated landmark. The Frankfort city archives contain an official document of the year 1405, in which is seen a picture of the bridge, showing already the crucifix and the rooster, and after that time the city chroniclers frequently made mention of both. In the autumn of the year 1434 we are told how both were blown down during a violent storm and sank in the river, but were fished up again; and after being repainted and gilded by Sebald Fyol at a cost to the city of six gold guilders, replaced more firmly than before. The crucifix had been somewhat damaged by the fall, but remained afterwards for a long period unharmed. During the beleaguring of the city of Frankfort in the year 1552, we are told in an old song how the venerable bird was wounded,—

> "Oh, have ye then all heard the news?
> A leg from the rooster was shot;
> So that he must now limp about,—
> And you can believe me or not."

The crucifix and the rooster were witnesses of many bloody encounters. In the year 1635, during the Thirty Years' War, a battle raged between the Swedes on the one side of the bridge, and the Imperialists and Frankforters on the other, for several days. During the *mêlée* a bullet struck the rooster and knocked it from its perch into the Maine, whence it was never recovered. Another Swedish bullet struck the thigh of the Saviour on the crucifix, and the indentation may be seen to this day. With this incident tradition has been at work. A Swedish soldier, a zealous Protestant, disgusted with the symbol of the Papacy, had taken aim at the crucifix. He hit the mark, but the bullet rebounded and killed the shooter on the spot. The city councillors did not allow the bridge to be deprived long of its tutelar bird, for we are informed that on the 11th of January, 1636, a new rooster was constructed and placed on the old spot. A poem was written for the occasion by a Frankfort poet laureate, Johann Flittner, the author of several German and Latin poems. One hundred years later, on the evening of the 16th of December, 1739, a fresh misfortune befel both crucifix and rooster, the central arch of the bridge gave way, taking with it the two landmarks. It required eight years to repair the bridge, and further two before the crucifix and the rooster were replaced. The latter was made of beaten copper, heavily gilded, for which a sum of 200 florins was paid. A lengthy poem was composed for the occasion of the inauguration by a member of the city council, Von Lersner. Thenceforward the rooster perched on unharmed amid the Napoleonic wars of the commencement of the present century, the struggles of the Revolutionary era, and the Prusso-Austrian combat.

Such is the outer history of the rooster, as it were; but, together with the crucifix to which he is attached, he bears a greater inner significance. We have already mentioned the earlier presence of two secret chambers for the purpose of holding criminals. The crucifix and the rooster were erected on the bridge at a time when the most inhuman punishments were inflicted on criminals. False play, the wanton cutting of forest trees, the smallest offences, could be punished with death. Tortures of all kinds were in vogue,—piercing with red-hot iron, cutting off the ears, burning, drowning, and boiling in oil. Merian tells us that in the sixteenth century 131 persons were hanged, 53 beheaded, 41 drowned, 16 torn on the wheel, 7 burnt, and 1 buried alive,—altogether, over 200 persons in Frankfort alone, which city was a model of moderation. Dr. Kriegh is of the opinion that the crucifix and the rooster stand on the spot where the execution by drowning took place on the bridge; for, under this arch, the river was originally strongest and deepest. Here, too, the bodies of suicides were cast into the river.

But it is with the executions by drowning that we must explain the existence of the crucifix and the rooster. It was customary during the Middle Ages to erect a chapel or a crucifix near the place of execution, as was the case at Frankfort at places where executions of other kinds took place; and the crucifix and rooster were, doubtless, placed here, the former to call to mind the Redeemer, the latter to recall the denial and penitence of the Apostle Peter. To us now the rooster serves to attach these gloomy memories of old. The last execution by drowning in the Maine took place in the year 1613. These occasions were celebrated by the city guilds with great festivities. Possibly animals suffered at Frankfort as well as at other places. In an age when the authorities sent out cryers to warn the May-chafers to get out of the land, and grasshoppers were threatened with ecclesiastical excommunication if they did not stay their ravages, it was not unusual to hear of animals being sentenced to death for their transgressions. To animals, birds, and insects were attributed a high degree of intelligence, which may account for the tradition that this rooster had formerly the faculty of distinguishing whenever a Jew passed over the bridge, when he was supposed to crow in mockery. People of the city have an old saying that every time this remarkable bird hears the clock of the cathedral church strike twelve, it crows three times. All we can say is that the rooster, besides reminding us of ancient barbarism, brings up in the legend connected with it relics of heathen worship. When the primitive faith was abolished, the Devil had to fill out in his one person the places previously occupied by Odin, or Thor, or Loki, and to perform the labours which the giants had been accustomed to perform in the mythological era. The Devil cast blocks of stone at the Christian churches like the giants did at cities. Like the giants, the Devil appears as a master-builder. As the former are betrayed by gods and heroes in the building of Walhalla, so is the Devil befooled by men in the building of the Frankfort Bridge.

What else shall we record about this curious bridge? Children born in the mills beneath it are called Gickelburgers, or *protégés* of the rooster, since they are neither Frankforters nor Sachsenhausers. To do justice to Charlemagne would require more space than we can spare; but we would record the Sachsenhausen tradition that Charlemagne is the author of a discovery which has proved of incalculable benefit to mankind. The story goes that a worthy citizen of Sachsenhausen was once crossing the bridge with his little boy, and the latter, being of an inquisitive turn of mind, after gazing at the statue for some time, exclaimed, "Father, why does he hold that apple in his hand?" referring to the imperial apple which the ancient ruler holds. "Oh, my son," replied the father, "that is Charlemagne; he it was who first invented apple-wine (cider)." There is still another story of an Anglo-Saxon tourist, who, wandering on the bridge, asked a resident Anglican the name of the dignitary represented by the statue on the bridge. "Charlemagne," was the reply, pronounced like Charley Maine! "Oh!" responded the other, "and so the river perhaps takes its name from him!" Across the river is the village or suburb of Sachsenhausen, famous for its dirty streets and its uncouth rude inhabitants. It has, nevertheless, produced a local poet, Ferdinand Stolze, whose works were once very popular in Frankfort. His poems are written in the Frankfort dialect. A German guide-book maker, floundering in the English language, says of Sachsenhausen,—"Charles the Great, the founder of the place, sent hither the unruliest of the vanquished Saxons, and the descendants of these noble Saxons are mostly gardeners, vine-dressers, cartmen, porters, or bleachers. Even nowadays they are possessed of their ancestors' character; they are even celebrated for a sound and witty stoutness. [The writer attempts to translate the German expression *Witzige Derbheit*, which simply means an ignorant bluntness.] Strangers who like undaunted frankness and an excellent cider, which Sachsenhausen is famous for, a very simple but unmingled wine, must go and look for a pine crown or a branch over the door." But this "natural man" we prefer to see at a respectful distance, and admire him in pictures, as the artist sees him, imbibing his apple-wine. We can, nevertheless, afford to admire his apple-orchards, especially when the trees are in bloom in the spring-time.

THE IRISH BOARD OF WORKS.

IT is not open to doubt that a department which is either overworked, or within the range of whose duty so large a number of subjects are contained that it is impossible they should be properly performed, is clearly an inefficient department. For there is a wide difference between a department itself having the control of a large number of subjects, and a non-departmentally educated head having the supervision of a department. In the latter case a fresh intellect trained to manage and understand business matters makes a better chief than one versed to the lips in departmental mysteries. But this does not apply to the other officers of a department who, if they have too many subjects upon which their attention is concentrated, must inevitably fail to perform properly and thoroughly the work of a department. And this, it is evident, is clearly the cause of many of the shortcomings of the Irish Board of Works, as set forth in the Report and Evidence of the Departmental Committee which has been investigating this important matter.

The Board of Works in Ireland was created in the year 1831, under the Act 1 & 2 William IV., c. 33, and it then consisted of three commissioners and a subordinate staff. At the present time, for it is not necessary to go through the changes which have occurred since its creation, it consists of two paid members, an honorary and non-effective member, an assistant-commissioner, and a small staff. We say a small staff, because, compared to the work which has to be done, it is clearly decidedly small, for it consists of no more than sixty-two persons, exclusive of the Land Improvement Commissioners. Let us see next what is the outline of the duties which it is necessary that these sixty-two persons and the commissioners should undertake. And it must further be borne in mind that we have included in this number all the *employés* of the department, both small and great. We will give as an example the largest branch, that of the architect. There is, first of all, the architect himself, with the not very large salary of 800*l.* per annum, and a travelling allowance of 39*l.*, a somewhat singular amount. Beneath him is, next, the Assistant-Architect, with half the above salary, and three surveyors of buildings, who also each receive 400*l.* a year. Then come seven district surveyors, and the remainder consist of drawing

clerks, a draughtsman, copyists, and so on to the number of eleven persons. This is only one portion of the department, and, of course, the heads of it have to exercise control over other parts quite different in character, such as the land improvement and the account branch. For when the Board first commenced operations, it had to execute the duties performed by the Exchequer Loan Commissioners in Ireland, by the directors of Inland Navigation, and many other variously differing duties. At the present time the following may be considered a more or less accurate summary of their multifarious work:—1. Construction and maintenance of all public buildings. 2. Land. 3. Arterial drainage. 4. Inland navigation. 5. Royal harbours. 6. Commercial harbours. 7. Post-roads. 8. Railway and tramway inspection. 9. Certain piers and harbours. 10. Sea-coast fisheries. 11. Management of loans for labouring classes' lodging-houses and dwellings for sanitary purposes, under the Public Health Act of 1874, and for railways. Here, of course, are a multitude of duties, requiring every one of them accurate attention and great knowledge of details, but each of so large a character that it would be absolutely certain that much delay would necessarily occur in the transaction of the work by the responsible chiefs. And many things, also, must be left to subordinate officials which should be transacted by the higher personages of the department. It is not, therefore, very much to be wondered at that a good deal of dissatisfaction has for a long time existed in Ireland at the manner in which the business of the Board of Works has been carried on, and that the Committee of Inquiry have found much to reprobate. "On the whole," they say (Report, p. lxi.), "though it has been our pleasure to note proof of intelligence, industry, and general good intentions in the Board of Works, we consider that the facts elicited by our inquiry are sufficient to account for that feeling of uneasiness and dissatisfaction towards the Board which has for so long past found expression outside as well as inside Parliament." That is to say, putting the same sentiment in less Parliamentary language, the charges brought against the Irish Board of Works have in the main been proved, and its past administration is condemned. The real recommendation of the committee is simply that the Board of Works should be strengthened from top to bottom; when once that recommendation is made it is plain proof that the department has hitherto been overworked, and that its strength has not been equal to the duties which it has to perform. That is really the best excuse which the Board can have for its many shortcomings in the past. You may regard a man as negligent and worthy of blame who does not perform thoroughly the duties with which he is intrusted; but if you find that he has to do work which could only be reasonably expected to be performed by two persons, it is not the man but the system which is really to blame.

Let us, then, briefly note some of these recommendations. It is proposed that the Board should, in future, consist of a chief and two other commissioners; that a secretary with definite duties should be called into existence; that the commissioners should distribute the business among themselves, and that no new measure should be taken and no fresh expense incurred which has not previously received the sanction of the Board in its collective capacity, the personal responsibility of individual members being confined to carrying into due execution arrangements which have already been determined upon by the Board. There is also to be noticed a suggestion rather than a recommendation of the highest importance. It is that the Board should be represented in Parliament by a responsible Minister, and that for this purpose the chairmanship of the Board might be combined with the presidency of the Local Government Board, and thus the Treasury and the chief secretary for Ireland would be relieved of some of their duties, and the work to be done by the Board of Works would be directly within the influence of the British Parliament. "The administration," say the Commissioners of the Board of Works, "has no doubt much influence on the progress and prosperity of Ireland, and, therefore, should be quickly amenable to public opinion." Such a change as here proposed would, there can be no doubt, be most valuable; but whether it would be feasible for the chairman of the Board adequately to fulfil his present duties and also those of a Parliamentary nature, is more than doubtful, and any such scheme would appear to necessitate the appointment of a fourth commissioner,—a result, however, which would be by no means to be deplored in the interests of Ireland. Consider, for example, that the Board have under their control the buildings of between 1,100 and 1,200 national schools, and it at once becomes apparent how necessary it is that there should be some means by which public opinion may fairly criticise the way in which these duties are performed, and by which the Board may openly and fairly defend their management. The health of hundreds of the rising generation may depend upon the proper fulfilment of these duties, and the House of Commons is the proper arena both for public criticism and official defence.

So much for the top. As to the bottom, the changes recommended are to the same effect: one department will be a sufficient example. We have already given the staff of the architect's branch; we will now mention the tonics recommended in that portion of the Board. Two more district clerks of works should be added; also another furniture clerk and lower division clerk; and the two temporary draughtsmen should become permanent,—making three in all. And this is by no means more than the work of this office demands; for it consists in the general control and supervision of all buildings under the Board's charge; the preparation of designs for new buildings; the examination and revision of plans submitted by local bodies and private individuals who obtain advances from the Board, and the inspection of works for which such advances have been made whilst in progress. As a matter of fact, therefore, it would seem to be the higher parts of this branch which most require strengthening, because the main work is of a responsible and important character. Indeed, we can hardly conceive duties more closely connected with the comfort and material progress of the Irish people, and the improvement of Irish towns, than those which fall to the lot of the architect of the Irish Board of Works. In fact, it is not going too far to say that the architect of the Board may do much to make or mar the architectural beauty of the Irish towns; because, by having public buildings handsome in appearance and useful in construction, not only is Ireland, as a country, actually improved, but a great impetus must necessarily, though indirectly, be given to the general improvement of buildings which do not fall within the supervision of the Board. Moreover, it seems pretty clear from the report that the actual materials and work done by contract under the superintendence of this department have not given satisfaction to capable and independent persons, such as the officers of the Royal Engineers connected with the Ordnance Survey, in regard to buildings for this branch of the service. We refrain from going further into details, and only touch upon this point here to show how necessary it is that from every point of view the architect's department should be efficiently officered and manned, and should also be under careful and capable supervision. We have here only in the most brief manner pointed to the outline of the duties of the Irish Board of Works, and to the manner in which the shortcomings of the past are proposed to be remedied in the future. At another time we may recur to some other aspects of the question.

THE FUNCTIONS OF AN ACADEMY AS AN EXHIBITING BODY.

PROBABLY more hard things have been said of the present exhibition at the Royal Academy than of any preceding one. It would, however, be very difficult to say with real accuracy whether, taken as a whole, the exhibition of 1878 is worse than its predecessors; but whether it be of the low character which is usually assumed is really no kind of blame to the Academy itself, unless there rests upon this body a duty to keep up its exhibition to a certain standard. In fact, as many loose things are said about the duty of the Academy as of the character of the pictures which hang round the walls of Burlington House. It becomes, therefore, in every sense advisable to consider what are the duties as regards the exhibition of pictures of a National Academy, for we may assume without more ado that the Royal Academy must be considered as the representative and governing body in English art; not, perhaps, in fact as regards the performances of its individual members, but looked at under all surrounding circumstances, and having regard to the semi-official position which even its most modest supporters must allow that it holds.

The first part of the duty of an academy in the exhibition of pictures is to take care that such an exhibition should fairly represent the general condition of the national art of the time. There should be no desire to favour one school more than another, nor to place one class of subjects over another. Every school and every kind of subject should have the opportunity of being fairly represented, fairly criticised, and fairly judged. Some kind of subject may not meet with general approval, but, nevertheless, those who hold that such is worthy of admiration are entitled, so to say, to be heard in defence of it, and such defence is only possible by the fair exhibition of it. Moreover, a young school of artists may justly look for a fair field and no favour at the hands of our national academy; and, paradoxical as it may seem, such a body in their exhibitions should be as far from being academical as possible. And just as a veteran statesman desires to bring forward rising talent, so should an academy do all in its power to bring into notice any distinct school, however small, that it may properly gain adherents, or, on the other hand, sink into the obscurity which it justly merits.

Next, as a corollary to this first proposition, comes the second, that whilst every school and every class of subject should be represented, the best works only of such school and class should be admitted to the academic exhibitions. There should be a strenuous endeavour to raise the national taste by the exhibition of good works before all things, and to give to those artists who are enabled to exhibit pictures at this exhibition a reputation from having done so which is fairly and justly earned. There is no possible object gained by exhibiting a mass of works of a similar character and of small merit: it causes the deserving works to be lost in a crowd of rubbish; it lowers the public taste; and it takes away the reputation which should be attained by a place in the Academy. Moreover, it has this further drawback, that it necessarily so crowds the exhibition-rooms that many works cannot be fairly judged, so that works which deserve accurate notice are often really thrown away. And it must be borne in mind that so great is now the opportunity of exhibition in the galleries of picture-dealers and private societies, that it is almost wholly impossible for any painter of any merit not to take his proper place among contemporary artists, even if by some oversight his productions are overlooked by the committee who select the pictures which are to be exhibited in the rooms of the Academy. But there is, as it seems to us, one exception to this rule, that only the best pictures of every school, and dealing with every class of subject, should be admitted, and that is when the subject of the picture is in itself of such intrinsic interest that even though the execution is not of the highest kind, yet the nature of the subject should cause it to be admitted. Of course, if a picture is irretrievably bad, no amount of interest in the subject matter should override this inferiority of art; but if a picture falls somewhat in technical execution below the average, yet is of a subject of high interest, then it should be admitted. And this rule applies with most force to portraiture, where the representations of some well-known man deserve admittance, even though as we have said, they are not quite up to the average. This rule, too, would have this effect in regard to other classes of subjects than portraits, that it would be an incentive to the choice of good subjects; it would give scope to the imagination, and to the mind of the painter, as well as to his technical powers.

We have said that by permitting large numbers of every class of subject to be exhibited the really good works are lost, like needles in a bundle of hay; and we hold further that an academy sins by overcrowding its rooms, because it is one of the duties of such a body to give every opportunity to the public for the intelligent appreciation of art. The *salon* should not be a great auction-mart, or a merely popular rendezvous, but it should be a place where the productions of contemporary art should be spread out pleasantly before the observer, and where he may observe and meditate over the condition of the national art. Moreover, in every such exhibition there should be some attempt, at any rate, made to classify the exhibited works: exigencies of space must from time

to time cause any general rule of this kind to be impossible of application, but that does not prevent its being applied where possible. Because, if, to take portraiture again as an example, one portrait is in one room, another in another, one set between two landscapes, and another between two social scenes, it is well nigh impossible to compare one work fairly with another, a great deal of time is necessarily lost, and the whole character of the exhibition is consequently lowered.

Moreover, in regard to the representation of every school and class of subject, it seems necessary to point out this, that those schools or subjects which are of a high or interesting kind deserve a larger representation than those which do not possess this merit. For so long as each school is fairly represented, a national academy, in the exercise of its duties as guardian and educator of the public taste, should endeavour to set before the public view as large a number of works of art of a high class of subject as possible. By this means, again, it may by degrees do something not only to elevate but to keep on a higher level public taste, and thus increase the general appreciation for art.

These are the main positive duties which belong to an academy as an exhibiting body, and consequently other negative ones flow from them. One of the chief of these is to give no greater advantages to those exhibitors who may be members of the Academy itself than to those who are not within its pale, to consider the members of the Academy and the non-members as equal in the exhibition-room, and to be as fair and without favour in judging of an Academician's work as in considering that of the greatest tyro in art. Another is to remember that possibly by the endeavour to raise and keep art in a high position, a large measure of unpopularity among artists may arise; but an academy should be as regardless of ephemeral pleasures of popularity as the judge on the bench. The one is the guardian of national justice, the other of national art. Another, to bear in mind that to fill the academic coffers is the least of the results of an exhibition which should be aimed at, and consequently not to desire, above all, that flocks of ignorant persons should crowd its portals, not for the purpose of studying art or of intelligent pleasure, but to go through a certain form which has become a kind of social duty; for when once this latter notion becomes an ordinary impression in society, it is pretty evident that the exhibition is not based on right principles.

It is not necessary now to consider to what extent the Royal Academy acts up to these general principles; for any person who has thought over them in relation to the several exhibitions at Burlington House which he may have seen, can judge for himself how far the Royal Academy follows them out. And it must be remembered that whilst speaking of pictures, these principles are applicable equally to sculpture and to architectural drawings, possibly even more so to this latter branch of art in some respects than to any other; for the architect has fewer opportunities than the painter of showing the results of his education and thought to the general public, except in his completed and actual buildings. We will, then, not now apply the test of these principles to the Royal Academy, but we may point out that if a national academy, or an academy which holds this place, does not act up to them, it must ultimately either lose its place as the representative body of the national art, or such drastic reform will take place in regard to it as will cause it to fulfil those duties which before this it had neglected. One of these things is certain to happen sooner or later to any body of this kind not acting up to these principles; and in the interest of art in such cases the sooner the last of them happens the better. R.

The Portsmouth Master Builders' Association a few days ago had their sixth annual excursion, Eastleigh being the *locale*. The party, numbering 140, arrived at the Bishopstoke station by special train, and, headed by the marine band from Gosport, proceeded at once to the grounds of the Mount, by permission of the owner, Captain Hargreaves, where dinner was provided. Mr. H. Evans, chairman of the Association, occupied the chair, and Mr. C. Light the vice-chair. Mr. Drew Bear gave "The Portsmouth Master Builders' Association," which was responded to by Mr. C. Light.

THE PARIS EXHIBITION.

SOCIAL AND SANITARY.

THE corner of the Champs de Mars, stretching within the angle which has the Porte de la Seine for its apex, the Pont d'Jena and the Porte Rapp for its extremities, embraces many annexes of considerable interest. On crossing the river, and leaving behind us the Trocadéro gardens, which we described in our last, we have a full view of what has been nicknamed *La Plage*. This broad open place, or walk, studded with chairs and benches, and a large number of the high seats with sheltering backs generally used at the seaside, presents the appearance of an esplanade at some fashionable watering-place. The Exhibition building, in the background, might be mistaken for a huge casino, while the occasional glimpse of the water of the Seine, the few masts of model yachts, &c., tapering upwards over outhouses that contain apparatus for saving life at sea, and small boats moored on land, all tend to nurture the illusion which has won for this portion of the Exhibition grounds the name of *the beach*. Down on the banks of the river, which can only be reached by descending a long flight of steps, are the exhibits of the ports of France, of all matters relating to navigation, and of fire-engines. Above are some handsome fountains, and the horticultural show. Passing by these attractions, we turn into the garden, glancing on our road at the air-meters, &c., from the observatory of Montsouris, used for testing the velocity of the wind, and calculating the amount of the rainfall. The air-meter seemed rather heavy, and suited only for rough work and approximate calculations. It could not be compared, for delicacy, with several English air-meters we have examined, notably the air-meter manufactured by J. H. Steward, of London, which has the further advantage of being comprised in a box of about 6 in. square. While touching on this subject, we should urge the more frequent use of these instruments. They are most useful in calculating, and especially in comparing, the efficacy of various means of ventilation. If we are doubtful as to the value of sundry windows, ventilators, and other openings, the air-meter will chronicle the amount of air that has passed through them in a given time, and enable us to judge with comparative accuracy their respective value; at least, if we are careful in taking into account the direction and force of the wind, the possibility of a return current, the difference of temperature when the different experiments are made, and the size of the openings in question. By these means we have often discovered that the windows, &c., which were considered very efficacious, proved to be of little or no use, while other apertures really supplied the larger volume of air, though these were sometimes not included in the scheme of ventilation.

Immediately beyond these scientific instruments will be found the exhibit of the National Tobacco manufactures, a monopoly which is not without its use if viewed with respect to the health of the smoker. In France, at least, we know that we can obtain in all parts of the country, and for precisely the same price, the same cigar, cigarette, or tobacco; we know that these have been manufactured under Government control, after Government analysis, and that it will not be to the benefit of any individual to adulterate these products. In France, no one need smoke in ignorance of what he is imbibing, but can obtain the most precise information respecting the tobacco he is consuming, its value, where it is grown, and the proportion of nicotine it contains. At the Exhibition he may watch how the tobacco is prepared, and how it is analysed. Papers, books on Paris, and official documents will complete the history of every French cigar. Would that we were as well acquainted with the origin, the chemical properties, and mode of manufacture of those habanas supplied to the English market, whose name is legion, and whose birthplace is hidden within the German lodging-house walls of Whitechapel!

M. O. André's model house is wood and iron; the large building devoted to the exhibits of the Creusot, a smaller structure for samples of coal, and another devoted to the Compagnies de Gaz, are the principal structures forming the group of buildings immediately behind the French restaurant and the French tobacco manufactories. We will not insist on the marvels of ironwork that were produced under the guidance of M. Schneider, nor dwell on the model schools and cottages built for his numerous colony of workmen. Creusot was described at length in an article published in a recent issue, and specially devoted to this subject. Another building, equally large, and containing the exhibits of the Ministry of Public Works, is close at hand. Here we were at once agreeably impressed by the freshness of the air, and, at the same time, by the absence of draughts. The fact is that this structure is ventilated by Messrs. Geneste & Hercher's system. Outside, at the back, their suction-wheel may be seen at full work, and in stooping over it the strong rush of air extracted from this building is sufficient to blow away the hat of an imprudent investigator. The purity of the atmosphere is consequently due to a powerful engine, and Messrs. Geneste & Hercher have felt that, in dealing with public structures, mechanical means of ventilation were indispensable. The pavilion, where this interesting experiment may be daily watched, and which we must explain in detail on a future occasion, contains many objects which cannot fail to attract the attention of our readers. There are models of bridges, aqueducts, lighthouses, dredgers, diving apparatus, &c. We have also a rich collection of large albums containing the most graphic and elaborate photographs of the great public works undertaken in France by the State. Among the maps that cover the walls we notice a chart of all the lighthouses of France, and of all the mineral products of the country. Samples of these latter are fastened to the part of the map representing the department where they abound. There is also a valuable library relating to public works, and many other matters demanding careful study and examination.

The annexe devoted to methods of lighting and warming houses comes next, as we pursue our windings towards the Porte Rapp. This is Class XXVII., and apparently there was not room for all appertaining to this subject within the main building, and hence the necessity of this annexe. This class recalls, to some extent, the exhibitions of domestic and sanitary appliances which are sometimes held in England simultaneously with the Social Science Congress or other gatherings of this description. First of all, we come upon M. Giroud's gas-regulators and rheometers. This patentee professes to have solved one of the chief causes of ill-health and extravagance, by ensuring the more complete consumption of the gas used for lighting rooms, &c. This patent is based on the three following principles:—First, a regulator should be composed entirely of metals not subject to oxidation. Secondly, the pressure from the gas-works must be annulled so as to render the supply independent of external influence. Thirdly, the apparatus should contain no levers, pulleys, or other contrivances likely to cause impediment through friction. To carry out these principles, the gas is received in a red copper cylinder, and here a special mechanism pumps it into the house at a given rate and quantity which cannot vary. This, together with a special gas-burner, called a *rhéomètre*, ensures the complete consumption of the gas, a result equivalent to an economy varying from 15 to 30 per cent., and preserves the atmosphere and furniture from all the injurious and destructive influence of unconsumed gas.

Unfortunately the very next exhibitor proposes a system of lighting which would entirely destroy the advantages to be derived from this check placed on the supply of gas from the outside. M. Emile Lavril would do away altogether with pipes and canalisation, and gasworks. He suggests that each householder should make his own gas. What bickering and quarrelling in municipal and vestry politics such a solution would avoid! This hydrocarbon gas is obtained from rectified mineral oils, which need only the same precautions in their use as usually employed for alcohol or petroleum. The cost, per hour, for one light of this new gas, amounts, it is stated, to 0·037f. or 0·031f., while the ordinary gas, at 30 centimes the cubic mètre, amounts to 0·045f., and at 45 centimes the cubic mètre, to 0·067f.

M. A. Bengel has a patent for warming apartments with gas and air mixed together, obtaining the maximum of heat from the minimum consumption of gas, and this without allowing any escape of carbonic acid, smoke, or odour. The interior of the stove is cylindrical, its exterior triangular. There are four cylinders, the centre being a sort of boiler, which gives out great heat; the triangular shape of the stove

facilitates the admission of air from the room which travels round the seat of combustion without mixing with the fumes or gases escaping therefrom. An escape of steam is so contrived that it occasionally moistens the hotter parts of the stove, adding by its oxygen and hydrogen an element that may be burnt, or may add to the vitality of the air by the proportion of oxygen contained in the water, and which escapes consumption. The other details of this stove are complicated, and cannot be easily understood without a model. The practical conclusion is that this stove, we are assured, will warm a room measuring 150 cubic mètres by the consumption of 240 litres of gas per hour; while a larger stove, burning 300 litres of gas per hour, will warm 250 cubic mètres of space. Unfortunately the degree of heat thus imparted is not fully explained. We should have liked to know what consumption of gas is necessary to raise the temperature in a room of a given size from, let us say, 50° to 60° Fahr.

Messrs. Gaillard, Haillot, & Co. have also a remarkable stove in hollowed bricks, so as to avoid the oxide of carbon that escapes from stoves in metal. The ordinary stoves, it is urged, do not cause much ventilation; the movement of air hardly exceeds the 15 to 16 cubic mètres required for the consumption of each kilogramme of coals burnt. The old-fashioned stove, in a word, draws enough air for its own wants, but leaves the room and its inhabitants to take care of themselves. An extra chimney or a ventilating shaft, with a gas-burner or small fire within to create a current, is therefore necessary; and this is generally considered too expensive and troublesome. Messrs. Gaillard & Co. profess to obviate these difficulties. The vitiated air gathered by tubes from all parts of the room enters at the basement of the stove at the back; the pure air enters the basement at the front; both travel along parallel channels, the one to be ultimately expelled by the chimney, the other, warmed by its proximity to the smoke and hot-air flues, is thrown into the room from the top of the stove. In summer-time, by the opening of certain traps, the air can be drawn into the room from the outside when the stove is not lighted. It is, therefore, a ventilator for both summer and winter.

M. F. V. Grossot, another exhibitor, makes extensive use in his ovens and stoves of Gurney's batteries, an effective, though certainly not novel means of economising heat. His *helicoïde* column is, we believe, more novel. This is a spiral division, placed within the flue of a stove, so that the smoke and hot air must travel round and round before it leaves the room, and enters the chimney; thus the heat has time to warm the flue and spread itself over the room. We did not notice anything very new from the celebrated house known as "À la Ménagère"; this is a firm which devotes its energies to selling the inventions of others. Messrs. Cuan Aîné & Co. have here a fire with a screw in the chimney, which revolves under the influence of the heat immediately below, and by its revolutions greatly increases the up-draught, thus causing the fire to burn with more vigour, and also ventilating the room. In the main building this firm have other objects of interest; and it was their stove which, during the fearful winter of 1871-72, warmed the northern portion of the Palais de l'Industrie, imparting a temperature of 20° centigrade, while outside the thermometer had fallen to 19° below zero. The system adopted seems to recall Gurney's batteries, modified to a triangular shape.

In the Annexe des Machines we found apparatus for making Seltzer and other effervescing drinks, and regret to note that but little supervision is exercised as to the nature of the water employed. One important firm confessed to us that they used Seine water, though so much money has been spent to provide Paris with water from the pure sources of the Vanne and the Dhuis. In front of the annexe devoted to French machinery, we found a pavilion where all the mineral waters of France were exhibited, and a great number of them can be tested at the trivial cost of 15 centimes a glass, including a pleasant admixture of syrup. The thirsty visitor should, however, be careful which water he selects, as some produce powerful effects. And now, we have at last completed our journey round the outside of the main building. We entered by the Porte Rapp and turned to our left, and worked round till we have returned to our starting-point, including the Trocadéro gardens in our long journey. When we consider that notwithstanding our efforts to condense our materials, we have not yet mentioned the contents of the main building itself, some idea may be formed of the immensity of the Exhibition. At the same time, the result of great efforts, in which all nations have participated, cannot be dismissed in a few paragraphs, and we are glad to offer our meed of praise to these useful endeavours.

THE NEW INTERNATIONAL POSTAL TREATY.

THE stipulations of the new international postal treaty which was signed at Paris in June have been published, and it is now possible to furnish exact particulars of the nature of its most essential conditions, and the changes effected in the old regulations.

The new treaty, in its main points, is based on the approved principles of the Bern Convention. It may be looked upon as adding strength to the provisions of the latter compact, which has now, in a sense, been superseded by the new treaty. By this instrument the Postal Union has been considerably enlarged, including within its scope almost all civilised countries of the globe, and especially subjecting to its regulations the numerous and important mail steamer lines. It provides further facilities for international postal intercourse, and carries out more stringently the principle of uniformity of rates than was possible in its initiation in 1874, when various provisions of an exceptional and transitional nature could not well be avoided.

At the Postal Congress which met recently at Paris, all the countries belonging to the Postal Union were represented by delegates, with the sole exception of Persia, the representative of which was prevented by illness from attending. Delegates also were present from Canada, Chili, Hawai, Hayti, Liberia, Mexico, Peru, Salvador, Uruguay, and Venezuela. Those from Canada, Mexico, Peru, and Salvador have signed the new convention, by which their respective countries have become members of the union. The representatives of the remaining countries above mentioned have declared the accession of their countries to be impending. The Postal Convention of Bern was signed by twenty-two, the Postal Treaty of Paris bears the signature of thirty-two contracting parties. At the time of the foundation of the Postal Union in 1874, the twenty-two countries included populations of 345 millions; by the Paris Treaty, 750 millions of inhabitants of thirty-two countries are benefited. Outside the union are only several English colonies, a few republics of South and Central America, and China. In the case of China, however, it must be taken into account that there exist in the most important seaport towns of that country both English and French post-offices, which belong to the union, and that, besides, Russia maintains, for the expedition of letters, a land-post as far as Pekin, charging only union postal rates. China must therefore be considered to all intents and purposes as already belonging to the Postal Union. Having regard to the altered conditions, the name of "General Postal Union" is changed to "International Postal Union." The new convention is to take effect on April 1, 1879. According to it, the postage for a letter has been generally fixed at 25 centimes = 2½d. Besides this general rate, a second postage of 5d. has been introduced for trans-oceanic countries, which have entered the Postal Union in 1876 and 1877, on account of the expense of sea and land transit. The various Governments may retain this rate of postage in future, but they are not bound to do so, complete liberty of action being reserved to them. Having regard to this, and the postage for land transit, for which formerly two rates of 1s. 8d. and 3s. 4d. per kilogramme of letters existed, being in the new convention universally reduced to 1s. 8d., and the compensation for sea transport for long distances from 1*l.* to 12s. 6d. per kilogramme of letters, it will in future be possible to adopt one uniform rate of postage of 2½d. per letter. Before the foundation of the union the various rates of postage to countries now belonging to it were very numerous, and the number of rates charged for the mutual interchange of letters in the thirty-two countries that have given in their adhesion to the Bern Treaty was over 1,200.

For postcards, a uniform rate of 1½d., instead of 1½d. and 2½d., will be introduced.

It is the same with respect to the rates for printed matter and samples. In the case of the latter, the various differences have been removed; the present minimum postage of 1½d will be accepted for the whole extent of the union. For samples of a weight up to fifty grammes, hitherto subjected to a postage of ½d., an increase of the tax was necessary. This could not well be avoided, as, on the one hand, the present differences have been removed, and, on the other, the great majority of the Governments represented at the Congress were of opinion that the minimum rate of postage of 1½d., existing in Germany, was to be looked upon as an adequate compensation for the work imposed upon the post-office in receiving, despatching, and delivering such parcels, the number of which is not considerable.

A proposal made by Germany, of admitting in the International Postal Union not only samples, but also small parcels up to a weight of three kilogrammes, was discussed at the congress. But difficulties were raised from various and influential quarters, especially by countries not possessing a carriage-post. It was resolved for the present to refer the proposal to the International Bureau of the International Postal Union in Bern for consideration.

For letters and parcels not sufficiently franked, relief has been found, the additional tax to be levied in future being no longer assessed in accordance with the postage for unfranked letters. In close relation with this regulation, it has been found possible to abolish the provision of the Bern Convention, according to which insufficiently-franked newspapers were excluded from transit within the Postal Union.

Already, at the Postal Congress held at Bern in 1874, it was proposed to admit for transmission within the General Postal Union, besides ordinary correspondence, also letters containing valuables and money orders. At that time considerable difficulties, of a nature not then easily to be overcome, opposed themselves to carrying out the scheme. The Postal Congress of Paris in 1878 has succeeded in framing two agreements, of which the one, respecting the transmission of letters with valuables, has been signed by eighteen; the second, concerning the issue of money orders, by sixteen, contracting parties. Further adhesions are expected.

The new Postal Treaty may be pointed out as another progressive step in opening up the friendly intercourse of nations. It weaves a visible bond of union round almost all civilised peoples, reminds them of its benefits, and forms a powerful impetus for similar efforts in related branches. We now count by millions those who experience daily its relieving and facilitating effects on the intercourse and the exchange of ideas in the various material and intellectual spheres of human activity.

FAMAGOUSTA.

THIS town, situated on the eastern side of the Island of Cyprus, and thirty miles north-east of Larnaka, with which it might be connected by a narrow-gauge railway, offers, it is said, greater facilities for the construction of a harbour,—and no harbour exists on the Island at present,—than any other. A plan has been prepared, by which an area of about 300 acres could be converted, with a certain amount of dredging, into a harbour, with a minimum depth of 27 ft., where vessels could be afloat at all times under shelter. It is proposed to construct a breakwater, to run in a N.N.E. direction, about three-quarters of a mile in length, along the ledge of rocks, which at present affords a certain amount of shelter to vessels, and would form a natural foundation upon which to construct the work. These rocks in places rise so high out of the water as to leave comparatively little artificial work to be performed to complete the structure. This isolated breakwater would shelter the proposed harbour from easterly and southern gales, while the trend of the coast on the north and east would protect shipping from storms coming from the northerly and north-easterly quarters. The estimate of the probable cost of the works as made by the engineer, Mr. Hamilton Fulton, amounts to 500,000*l.*

The National Portrait Gallery. — Earl Stanhope has presented a marble bust of his father, the late Earl, to the National Portrait Gallery. The bust is copied by H. H. Armstead, A.R.A., from the original at Chevening, which was executed at Rome in 1854 by Lawrence Macdonald.

THE LATEST STAGE IN THE DECORATION-SCHEME FOR ST. PAUL'S.

WE adverted last week to the fact that a new report had been published by the Committee for the Decoration of St. Paul's Cathedral, and gave a short extract embodying the statement as to what the Committee had actually up to this moment undertaken to do. The report has been so generally published in the daily papers that it is hardly necessary for us to republish it here: it has probably been seen by every one who is interested in seeing it. But the occasion of publishing it is one which marks a new stage in the proceedings of no little importance, and which cannot but be satisfactory to us, in so far as it is a move in the direction which we must regard as, comparatively speaking at least, the right one; at all events, it is a move away from what we have before thought it necessary to condemn as totally unsuitable, both from an artistic and an intellectual point of view.

To speak more plainly (since in regard to a matter of such public interest it is necessary to speak plainly), it seems pretty obvious that the proposal to cover Wren's building with designs in a semi-Gothic, semi-Byzantine manner, and inspired by a religious or ecclesiastical feeling totally at variance with that which prevailed when St. Paul's Cathedral was built, is finally disposed of by the discovery of the design sketched on a large model by the sculptor of the Wellington Monument, and to which the committee seem now almost entirely to have transferred their allegiance. Those who remember in how enthusiastic a spirit Mr. Burges's Byzantine designs were commended to public admiration may think that to find a similar enthusiasm now transferred to a design so utterly at variance with it as that of Stevens, does not say very much for the calmness of judgment of a committee who seem prepared to admire such opposite things* with equal zeal. However, we, who objected from the first to the whole spirit and style of the former design, may, at least, be glad to see attention drawn towards one which is broad and grand in style, and is in keeping with the architectural feeling of the building. Stevens, in fact, worked by choice in the style which Wren himself would have approved, and whatever there may be to criticise in his design in detail, its very faults are in harmony with the architectural detail by which it would be surrounded. Whether on that account such faults (for faults there certainly are) should be retained, or whether we should not endeavour to design in harmony with Wren's building while avoiding the defects inseparable from the architectural style of his day, is of course a point deserving careful consideration.

The design by Stevens, which the committee have acquired, is now in the chapter-room at St. Paul's, where we had an opportunity of examining it. It is a model of half the dome and the drum, taking the section on the diameter of the dome so as to show the interior face; the model, which stands several feet in height, takes in also the heads of the arches carrying the dome. It is, however, incorrect architecturally in detail, as the pilasters beneath the dome do not lean inward, as in the building, and are besides too short in proportion, and the section of the dome is rather too flat. It is, however, quite sufficiently correct for the purposes of a sketch, which is all that it can be said to be. Upon the concave surface of the model dome the design is drawn, in a style entirely suggestive of and based upon that of Michelangelo, so far as the figures are concerned; the architectural detail is more that of Wren. The portions which in the report of the committee are spoken of as the "ribs," and which are coincident with the main lines of buttressing of the dome, are treated in a semi-architectural manner, and consist of a composition extending in a narrow strip from the springing to the apex of the dome, made up of a rather heterogeneous collection of florid architectural details and figures mingled together, or piled on one another, the whole standing on the shoulders of groups of stooping figures, who perform the part of Atlas to the structure over them. Between these ribs the wider spaces contain a considerable field of plain gold surface, with a large circle in the centre of each space in which the principal pictorial design is to be introduced, and a smaller circle similarly used in the narrower part of the space near the apex; these circles are slightly connected with the design of the ribs by horizontal bands connecting their borders with the borders of small panels in the rib designs. The large circles contain important subjects from the Old Testament, the smaller ones subsidiary subjects from the same; and beneath each of the large circles also is a more conventionally treated prophetic figure in an architectural frame forming a kind of niche. The drum of the dome, beneath the order of pilasters, is covered with a conventional ornamental design, so roughly sketched, however, that it is not easy to make out the precise intention.

The figures in the dome design are sketched with the same power of conception and freedom of design which characterise so remarkably the sculptured works of Stevens, and there is a general impress of genius about the whole which asserts itself at once, in spite of the roughness of execution. At the same time it must be said that the design as a whole is essentially a painter's and not an architect's design; and when we regard it from an architect's point of view it is evident that it has some shortcomings in regard to the scheme as a whole. The introduction of the "rib" composition at the points of buttressing is a recognition of the architectural construction, but in this respect it goes either too far or not far enough: there is not the slightest hint of structural stability in the oddly built-up collection of details forming these ribs, which, while they give (and are intended to give) a sort of quasi-architectural appearance to the whole, are disjointed in composition and ragged in outline. Thus they break up the design into vertical strips, but not in a sufficiently conventional or architectural manner: the composition is either too artificial, or not artificial enough. Two systems might equally be adopted in decorating a space like the dome; either the points of construction and the architectural expression might be ignored, and the whole treated simply as a pictorial design on a concave surface; or the whole might be divided into sections by a symmetrical architectural design forming the framework of the pictorial designs; but in that case the architectural framing should be carried out on true architectural principles and methods. This is not done in Stevens's sketch, so that it seems to be neither the one thing nor the other. There is also an obvious mistake (easily rectified) in showing the designs in the large circles with precisely the same gilt ground as on the spaces outside the circles; the pictures should certainly have a different ground, either in colour or in texture, from that of the intermediate spaces, otherwise the circles which frame the pictures would appear merely as *applied* to the surface of the dome, instead of being the confining limit of a pictorial design enclosed within the circle.

In the same room is a model prepared under the direction of Mr. Penrose, giving the correct section of the dome, and having sketched out on its inner surface a modification of Stevens's design, leaving the larger circles empty for whatever may be suggested as the most appropriate subjects, and modifying the design of the ribs so as in some degree to remedy the defect we have spoken of, by giving them a more connected architectural design. This latter modification, however, if made at all, requires carrying further than is done here; the ribs are a little more symmetrical in appearance, but they are still unarchitectural. If this alteration is what was complained of in Mr. Clayton's letter in the *Times* of the 23rd, we hardly think his complaint called for; the original design as it stands is not faultless, and the modification, so far as the "ribs" are concerned, is undoubtedly an improvement. If, however, the committee intend, in addition to these alterations, to substitute entirely different designs from the Apocalypse for Stevens's Old Testament designs,* it is obvious that there will not in that case be much of Stevens left;—not that we regard the committee as in any way pledged to carry out Stevens's design because they have bought the model; but there is certainly a claim to be made that the sketch of a great artist, if used, should be used with respect, and not merely pulled in pieces to be made use of in putting together a new design; and, at all events, we hope that Mr. Oldfield by this time regrets the ill-judged remark into which he was betrayed in his letter in answer to Mr. Clayton, that the committee, having bought the model, "had a right to burn it if they chose": an expression, to say the least, in very bad taste.

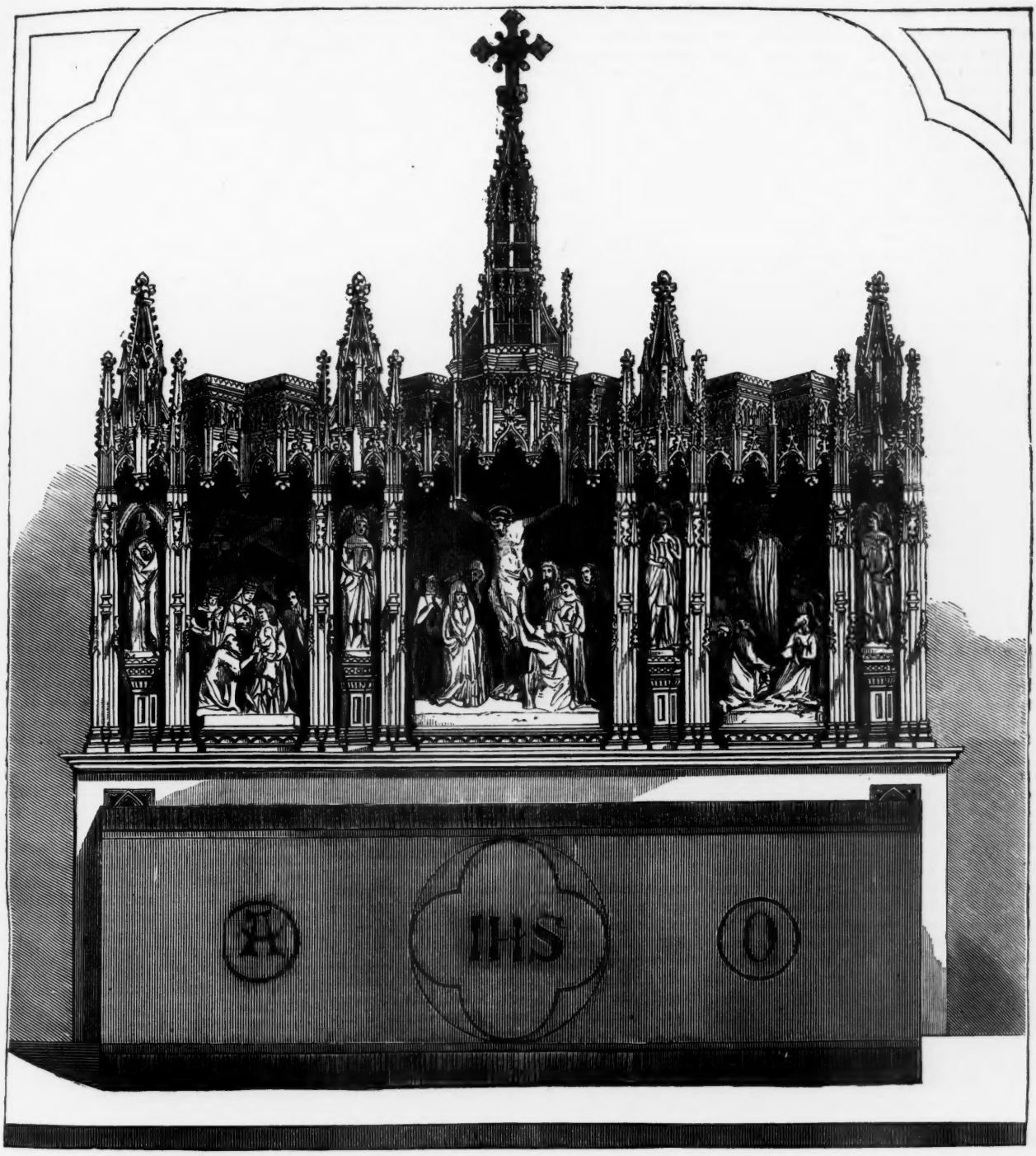
In the same number of the *Times* in which that letter was printed (24th ult.) appeared one from Mr. Cockerell, drawing attention to a point of great importance,—the effect of the proposed decoration on the aërial perspective of the interior. The committee had urged that the employment of the gold grounds and light colours used in Stevens's design would go far to relieve and remove the darkness of the dome. Mr. Cockerell says, in reference to this,—"May not a too-thorough remedy of this assumed defect produce another defect of a much more radical and destructive kind? We are so accustomed to abuse the atmosphere of London, that we have come to overlook the cardinal merit which it possesses of lending by its haze an artificial distance, and thereby conferring upon such a building as St. Paul's an apparent size which it does not in reality possess, and which an outlay many times greater than that now to be made would not, under other conditions of climate, have procured. Those who have long frequented and loved St. Paul's will painfully remember the disastrous sensation of loss of space which they experienced on first seeing the restored paintings of Sir James Thornhill some twenty-five years ago. If even a monochrome (perhaps a little hot in tone) produced such an effect, what may be expected of the 'bright colours' which by piercing the friendly haze will rob the dome of half its space? It is worth considering whether a sufficiently decorative effect may not be obtained without loss of scale by the use of aërial tints, even of a monochrome, for which the gray-blue treatment of the Limoges enamels (with perhaps an increased proportion of gold) might offer valuable suggestions."

That this criticism is not made without reason we are convinced; and, while very glad that anything so much more in keeping with the building than some former designs could be said to be, seems to be finding favour, we cannot but recur to an old fear on our own part, that it is hardly wise to spend so much on decoration of a high-class where it will be so little seen, and where, if it should turn out a mistake, the mistake would be so very serious. Immediately after studying Stevens's sketch, we walked from it into the cathedral, and, standing under the dome, endeavoured to realise how it would appear if executed. The result to the mind's eye was not satisfactory. It appears to us that if the important pictorial subjects contemplated are carried out with such force and brilliancy of execution and material as to be effective from below, the architectural effect and the scale must infallibly be lessened; and we doubt very much whether even under these circumstances what was lost in the architecture would be gained in the pictures. Our impression is, that pictures on ceilings are generally a mistake, and more particularly so in very lofty buildings; that they can never be properly seen, and that they and the architecture mutually injure each other. Before any of the great expense contemplated is incurred, we should strongly suggest for consideration whether the dome may not be more effectively and suitably decorated with some more conventional or architectural decoration, not destitute of meaning, but such as would give sufficient colour and brilliancy of effect without involving the execution of elaborate and most expensive works of high-class pictorial art in a situation where they must be all but thrown away.

* From the names appended to the recent report, the constitution of the Decoration Committee seems to have changed negatively by the retirement of some who were formerly members; but all who are now on it were, we believe, members from the first.

* We have received a pamphlet from Mr. Oldfield, entering into new suggestions for the subjects for the principal pictures, to be taken mainly from the Apocalypse. This part of the question involves, of course, other considerations besides those pertaining to art, and we cannot go into it just now; but it is one of great importance, on which we may have something to say on another occasion.

Liverpool Art Club.—The committee of this club propose to open an exhibition of the works of Josiah Wedgwood during the next session. It is proposed, in order to make this exhibition a useful representation of Wedgwood's productions, to exhibit the specimens, so far as it is possible, in the order in which they are described by Wedgwood himself in the various editions of his catalogue. A committee, consisting of Messrs. William Bartlett, A. H. Brodrick, Charles T. Gatty, and T. Shadford Walker, has been appointed to carry out this plan, and they are asking possessors of old Wedgwood ware to give them some general description of the works they possess, and which they would be willing to exhibit.



REREDOS: HOLY TRINITY, COVENTRY.

REREDOS: HOLY TRINITY, COVENTRY.

THE reredos in the church of the Holy Trinity, Coventry, and of which we give a sketch, was executed in Caen stone, by Messrs. Farmer & Brindley, from the design of the late Sir G. G. Scott, R.A. It was given to the church as a memorial of the late Mr. Bill by his widow. The subjects of the panels are the Crucifixion in the centre, and the Nativity and Ascension on either side. The canopy is perforated.

THE LEGAL POSITION OF SECRETARIES TO BUILDING SOCIETIES.

IT is a somewhat unpleasant feature of modern commercial life which has been, more or less, created by the use of joint-stock companies, that the management of companies falls into the hands of a certain class who give up their life to the working of these associations, and we do not refer to managers, strictly so-called, but to that numerous class who are shareholders, and have the direction of several undertakings. This arises to some extent from the fact that the ordinary shareholder does not trouble himself with anything to do with the management of the concerns in which he has placed his property, and the management of companies thus becomes the work of a certain number of people, who do pretty much what they please with other persons' property. It is undoubtedly a bad feature, for it produces speculations, rivalries, and often a heedlessness which would not otherwise arise.

Building societies resemble other companies in this matter, but it is rather from necessity than from choice, and the influential person in the case of these associations is rather the secretary and manager than the directors. The points, therefore, connected with the legal position of the secretaries of building societies cannot be too often placed before the public, in order that those who are in any way connected with these associations may have as much light thrown in their path as possible.

The Legislature has, indeed, always given an exceptional security of some sort or other to building societies against their acting officials, which, whilst it is, no doubt, to some extent a safeguard, has still a tendency to throw more than ever into the hands of a secretary the responsible work of the society, and to induce some carelessness in regard to the supervision of affairs. Thus, under the last Act of Parliament relating to building societies (37 & 38 Vict., c. 42, s. 23), every officer having the receipt or charge of any money must become bound with at least one sufficient security, or give some other security for the payment of all sums of money due from him to the society. But as regards societies registered under the previous Acts, there is a still further provision which deserves some notice. By 4 & 5 William IV., c. 40, s. 12, executors are directed to pay out of the estates, assets, or effects of secretaries and managers, all sums of money remaining due which they may have received during the time that they held office before any other debts. It happened quite recently that the Master of the Rolls was asked to put this particular Act into force (*Re* Marriott, 47 *Law Journal* Reports, 331), in the case of a secretary who had received certain moneys of a society, who had died bankrupt, and without accounting for the funds which he had received. But there the important question arose whether, since the defalcations of this official might have been detected long before by a proper diligence in the examination of his accounts, the society in consequence would cease to have a prior claim to the other creditors. We are inclined to think that it would have been for the general benefit of other societies which still exist under the old statute that this contention should have been upheld. But the Master of the Rolls thought

differently, and considered that the society had still the first claim upon the assets of its secretary. We think this decision of doubtful benefit, because it puts almost a premium on carelessness by the directors and responsible shareholders in these societies, and is quite different from upholding the claims of a society which, though it may have been defrauded, is still free from any carelessness which has tended to produce the loss. But having given the latest decision upon this point, the present state of the law upon it is plain, and we can state it clearly, even though we may not think it wholly beneficial in its probable consequences.

But yet, whilst there are these defences against errors or faults on the part of secretaries of building societies, it is obvious that they have a remarkably wide scope for their energies. For when the secretary, as he generally is, is also the manager of the society, it will be bound by his acts. This position involves, of course, the general rules relating to principals and agents; but it is well to point out that the society will in many cases be liable for his acts, although they may not be ratified in a strictly formal manner. Some years ago this proposition was made clear by a case decided in the Court of Common Pleas, Allard *v.* Bourne and Others, 15 Common Bench Reports (New Series), p. 468. In this instance the secretary had given orders for certain repairs, which were duly executed, but he had no direct authority to give this order, nor was a meeting of the directors called to sanction it, nor was it entered in the minute-book of the building society. Still the Court decided that the directors were liable. It is true that two of them were aware that the work in question was in process of execution, but that makes little difference to the general proposition, because the work had never been formally ratified by the directors as a body; indeed, the cause of this action was their repudiation of it. Nor, again, is it very material that the society had, so to say, taken the benefit of the work, because if the Court had not considered that such unauthorised orders were within the scope of employment of the secretary, the question of the benefit to the society would have mattered very little. What is of importance is to observe that this case does give a large scope to the authority of the secretary, who has also a manager's functions, and shows that no objections consequent on a breach of the society's rules will lessen the liability of the society, if the acts which produce it can be brought within the scope of the secretary's employment. Again, another but somewhat different example of the scope of the secretary's powers is shown by another decision. In this case, the subscription of a member had been received by the secretary, but the society was wound up before the date at which, in the ordinary state of things, it would have ceased to exist. It was then found that the secretary had never paid over the subscriptions which he had received to the society, and accordingly the payer of them brought his action against the secretary to recover the amount which he had paid to him. But the Court were of opinion that he could not recover these sums, because they had been received by an authorised official of the society, acting within the scope of his employment, and if any one could recover the money it was the society which had been defrauded of its funds.

These examples may be supplemented by another which shows that, on the other hand, the mere use of the word "secretary" will not always prevent a personal liability on the part of this official. In the case in question (Bottomley *v.* Fisher, 31 *Law Journal* Reports, Exchequer, p. 417), the defendant was the secretary of a building society, who had signed his name to a promissory note, merely adding to it the single word "secretary." The note was also signed by two others, who specified that they were directors of a certain building society. The plaintiff, it should also be pointed out, was not a member of the society of which Fisher was the secretary. The question then arose, was the latter personally liable on this instrument, since he affirmed that the money in respect of which it had been given was lent not to himself, but to the society. But the Court, without hesitation, considered that the defendant was personally liable, because the word "secretary" was merely descriptive of his position, and was not any limitation of his liability. He did not sign for or on behalf of a society, but in his own name, merely adding to it the word "secretary." This is an instance which should be carefully noted by these officials, because it is pretty clear that many a man may legitimately enough fancy that when the money is lent to his society, and he signs himself with the simple word "secretary," he is secure against being held personally liable. No branch of law has given rise to more litigation than that connected with the personal liability of agents, and the means of preventing it. Anyone, therefore, who occupies the responsible position of a secretary of a Building Society, should bear in mind that, largely as the judges are in the habit of construing the scope of his employment, yet that when he puts his name to written documents of a character other than merely ministerial, he should be careful to limit his personal liability, since the scope of employment cannot enlarge, or rather, in this case, limit, the effect of a signature.

Whilst, therefore, it is obvious, from the preceding observations, that, in spite of the protection afforded by the Legislature to Building Societies in regard to the acts of their secretaries, care must be taken by those having authority in these societies not to omit careful supervision of the secretary's duties, it is of equal importance for secretaries themselves to be prudent in the way in which they put their names to documents and papers not of a strictly ministerial nature.

OUR FLOATING WEALTH.

THE annual statement of the Navigation and Shipping of the United Kingdom embodies, in a large Blue Book of 300 and 400 pages, a mass of fact in regard to our floating wealth, and the trade it enables us to perform. In addition to the tables of the number and tonnage of vessels entered and cleared from and to foreign countries, the men employed in the service, and the vessels built, it gives us the details of the trades at the various chief ports, the extent to which at each the boats are employed in deep-sea fishing, the number of persons finding employment in securing the harvest of the sea, and other allied facts in regard to the means and ends of our navigation. It appears that during last year 308,665 British vessels entered at ports in the United Kingdom,—192,003 being sailing vessels, and the remainder steamers, but in tonnage two-thirds of the whole was under steam. The foreign vessels entering were 31,653,—only 5,059 being steam-vessels, but fully a third of the tonnage was of this class. Out of this total trade first given, about an eighth part was done to and from foreign countries and British possessions. On the registers of ports in the United Kingdom there are now registered 15,090 vessels, four-fifths of which are still sailing, the total tonnage of which is over six million tons; whilst our colonies add to this 13,158 vessels, of over 1,797,477 tons.

Looking now at some of the mass of tables, we find that into the ports of the United Kingdom in the year there entered from France 10,922 vessels; from Russia, 4,980; from the United States, 4,496; and from other ports in lesser proportions. Without, however, analysing these tables, we may turn to the abstracts of the principal ports, and find that Bristol had in a year 968 vessels entering with cargoes from foreign countries; Cardiff, 1,650; Goole, 804; Grimsby, 1,219; Hartlepool, 1,314; Hull, 3,258; Liverpool, 4,184; London, 9,233; Middlesbrough, 420; Newcastle, 2,196; Newport, 1,142; North Shields, 167; South Shields, 217; Southampton, 2,187; Sunderland, 749; Swansea, 847; Dundee, 449; Glasgow, 668; Grangemouth, 727; Greenock, 396; Leith, 1,681; Belfast, 418; Cork, 312; and Dublin, 648. The growing extent of the trade by steamers makes a table devoted to that trade interesting; and it may be stated, as indicating that growth, that out of the entrances of vessels at Bristol, above given, 244 were those of steamers; at Cardiff, 444 were steamers; at Goole, 697; at Grimsby, 523; at Hartlepool, 221; at Hull, 1,689; at Liverpool, 2,080; at London, 5,350; and at other ports, in somewhat similar proportions. As to the nations from which vessels entered, we may cite London as an example. In a year there entered, with cargoes or in ballast, into the metropolitan port, 8,066 vessels from British ports; 167 from Russian; 418 from Swedish; 1,107 from Norwegian; 437 Danish; 936 German; 411 Dutch; 89 Belgian; 128 French; 117 Spanish; 6 Portuguese; 49 Austrian; 10 Greek; 94 United States; and 4 from other countries.

Classed according to tonnage in the most recent year, and taking the vessels employed in the home trade to illustrate the whole, it may be said that out of 11,662 vessels in that trade, 5,379 were under 50 tons; 4,075 were between that tonnage and 100 tons; of 100 and under 200 there were 1,612; between 200 and 300, 252; 119 were between 300 and 400 tons; 128 between 400 and 500 tons; 58 between 500 and 600 tons; 31 between 600 and 700 tons; and 8 above 700 tons. In the foreign trade the proportion of the higher tonnages was larger; and, as may be expected, if the vessels be divided into sailing and steam, the latter give a great preponderance to the vessels of greater burden. In the larger ports, also, the proportion of vessels of small tonnage is limited, and it is in the smaller ports that the bulk of the vessels of limited burthen are employed. Passing on to the boats registered under the Sea Fisheries Act of 1868, we find that they are divided into three classes,—the first, boats of 15 tons and upwards; the second, boats of less than 15 tons "navigated otherwise than by oars only"; and the third, boats navigated by oars only. Of the first class there are registered as owned at seventy-eight English ports, 3,425 boats,—the aggregate tonnage of which is 137,768; at twenty-five Scotch ports 2,940 boats of 51,039 tons; and at nineteen Irish ports 405 boats of 9,861 tons; in addition to which there are between two and three hundred vessels registered at the Channel Islands. Of the second class, in the English ports, there are 7,130, of about 34,000 tons burthen; in the Scottish ports 8,309; and in the Irish ports 2,817. And of the third class, there are registered at the English ports 1,912; at the Scottish ports, 1,105; and at the Irish ports, 3,002. There are employed in the working of these fishing-boats 59,382 men and boys regularly, and in addition 54,236 occasionally.

As to the additions to our floating wealth, we have the figures for seventy-three English ports, at which in the year 571 sailing-vessels, of 114,545 tons, were built, the bulk of which were wood, and 262 steamers, all of which, except thirty-one, were built of iron. In Scotland, 119 sailing-vessels, of 88,963 tons, were built at fifteen ports, as well as 125 steamers, of 51,561 tons. Ireland built at seven ports seventeen sailing and two steam vessels. These numbers are in each case exclusive of vessels built for foreigners; and at ten English and Scottish ports there were fifty-six vessels built,—all steamers with three exceptions. In these facts, then, we have an approach to a statistical compendium of our navigation and shipping, of our floating wealth, as well as some indication of the results of the trade these figures portray. There has of late been considerable discussion as to whether our industrial supremacy is being successfully assailed. Into that question it is not now desirable to enter; but the figures which we have compressed so greatly point out that, whether Britain continues to be the manufactory of the world to the extent that it now is or not, we may fairly come to the conclusion that it remains as fully as of yore the sea-carrier of the world. We are still also very largely shipbuilders for other nations; not only by the small number of vessels built for foreigners directly, but also by the large number built for English owners, and afterwards sold to foreigners. It is, therefore, a conclusion to which the facts fairly point that, whether or not in other directions Great Britain is retrograding, in this she holds her own, and she still as largely as before, in Whittier's words, "helps to spread the silken chain of commerce round the world."

Paper.—An International Exhibition of all kinds of paper and pasteboard has been opened at Berlin, and will remain so till September 1st. The exhibition promises to promote effectually the manufacture of the important articles to which it is devoted. Five hundred and thirty-one firms, including most of the leading houses in Germany, Austria, England, France, Belgium, Holland, Denmark, Sweden, Russia, Italy, Switzerland, and the United States, have contributed towards the Exhibition. Besides every variety of writing and printing paper, there are special departments for paperhangings, paper blinds, and paper for building purposes, the general applicability of the article being demonstrated by a paper house erected in the courtyard, with tables, chairs, chandeliers, and stoves of the same vegetable material. Machinery employed in the production of paper is also shown.

BUILDINGS AT THE PARIS EXHIBITION: GREECE, DENMARK, AND CENTRAL SOUTH AMERICA.

THE BUILDINGS FOR GREECE, DENMARK, AND SOUTH AMERICA, AT THE PARIS EXHIBITION.

NOTWITHSTANDING the critical period through which Greece, during the progress of the Exhibition, was passing, she did not hesitate to take part in it, and nothing has been neglected, as far as time would permit, to make her exhibition as complete as possible. It is to be regretted, however, that events in the East have prevented the large ironfounders from being represented; and tanning, so important an element in Grecian industry, is but imperfect. "Under these conditions," to quote from M. Mausolas's admirable preface to the Grecian catalogue, "Greece presents herself to the world as an humble disciple of progress, in order to prove that nothing has been neglected by her for the development of the elements of civilisation, and that her tendencies and aspirations towards the principles of progress are inherent to her existence."

Visitors to the Paris International Exhibition would do well to make a careful inspection of this section, and obtain the catalogue, which is full of instructive matter. Preceding the list of exhibitors, there is a brief interesting geographical sketch by M. L. Lambros, while the geology and climate of Greece are treated of by MM. A. Cordella and E. Dragoumio. A few statistics are added, which prove the advancement Greece has made since she threw off the Ottoman yoke. In a separate catalogue will be found a list of the famous mineral waters of the country. The façade of the Greek section, pure and simple in style, is due to M. Benar.

Denmark, the birthplace of Thorwaldsen, has chosen for its façade a study from the Exchange at Copenhagen, and entrusted its execution to M. Duhleaup. In architecture, Denmark followed the general impulsion of Europe, but in a manner that national motives, above all those of the Danish Renaissance, have been made to predominate in monumental architecture and in industrial art, which is cultivated with much zeal in that country. M. Alfred Vaudoyer is the architect of the façade which distinguishes Central and South America.

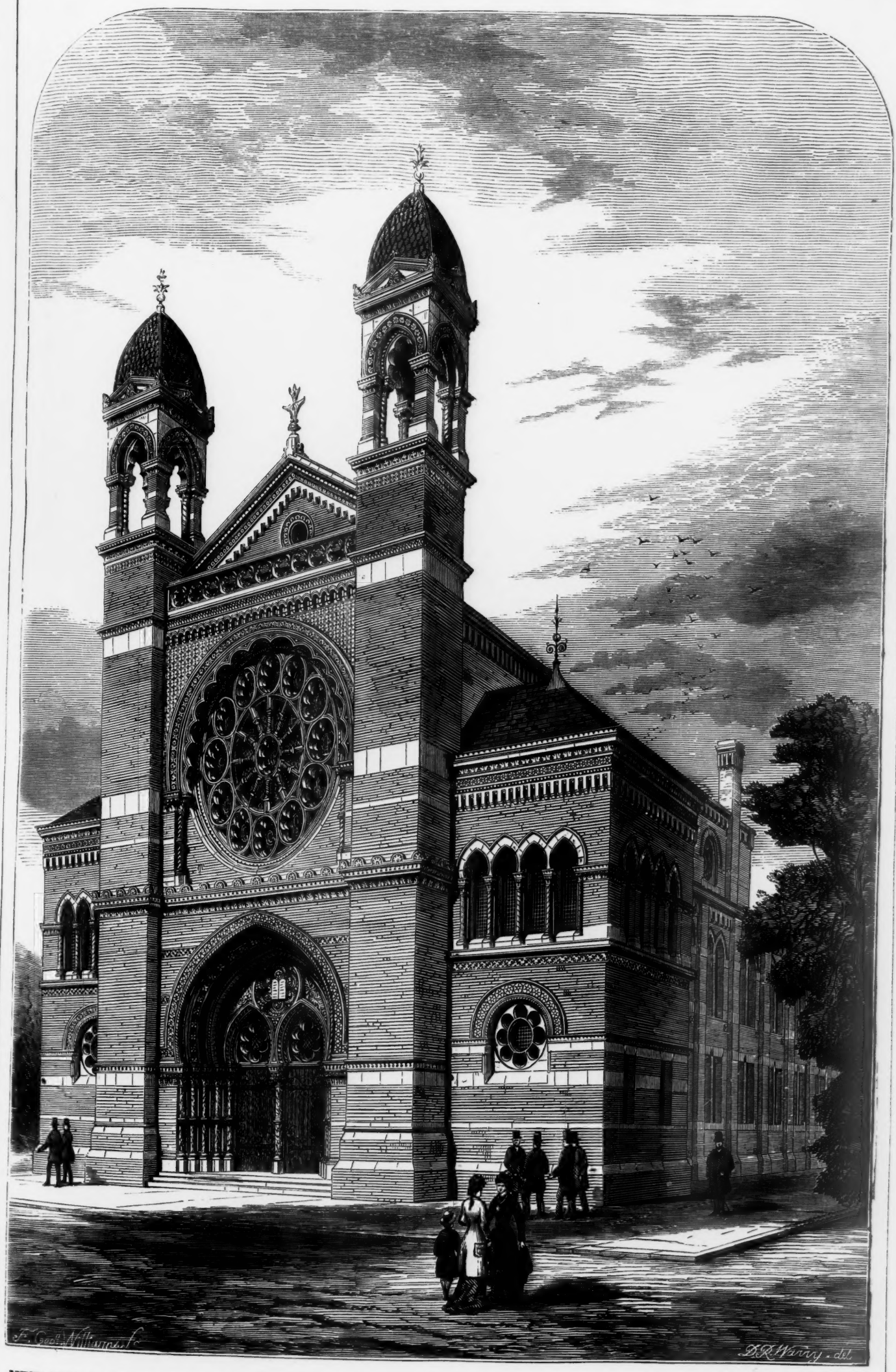
NEW SYNAGOGUE, PETERSBURG-PLACE, BAYSWATER.

WE give herewith a perspective view of the exterior of this building, which is now in course of erection. The synagogue has a frontage of about 71 ft. to Petersburg-place, and a depth of about 100 ft., and is well lighted on all four sides. The main entrance is by a recessed porch, in the centre of the west frontage, flanked by two turrets which terminate with minarets. There are, in addition, two subsidiary entrances at the north-east and south-east corners. There are four staircases leading to the galleries. The dimensions of the building on the ground floor are 65 ft. by 61 ft., and on the gallery level, 83 ft. by 61 ft., and it is calculated that the entire building will accommodate about 900 worshippers, although seating for a much smaller number is provided in the first instance. The style is Byzantine. The internal arrangements differ somewhat from those which usually obtain in the orthodox London synagogues, the ark being intended to be in the nature of a shrine placed in an apse or vaulted recess. The choristers will be placed in a gallery behind the ark, and nearly level with the ladies' galleries. In this position they will be well heard, without being seen by the worshippers. The ark and almemmar will be of marble. The exterior of the building is of red brick, with dressings of red Mansfield stone. Mr. N. S. Joseph, of Coleman-street, and Messrs. Audsley, of Liverpool, are the joint architects. The works of the substructure have been carried out by Messrs. Adamson & Son, of Turnham-green, and those of the superstructure by Mr. George Shaw. It is expected that the building will be open for service at the end of the year.

THE CAREER, IN GREAT BRITAIN, OF REVIVED GOTHIC.

THE Gothic style of architecture was a result of the overthrow of the Roman Empire by the Teutonic tribes from the North of Europe. But for this great event there would, we may presume, have been no such style; but, instead of it, a Romanesque something between our present Anglo-Classic and Gothic, which latter could only have arisen in the hands of nations who were regardless of antiquity, reverence for which would always probably have confined the Mediterranean and Celtic races to a more or less pure Romanesque style, as it did in South Italy and in the South of France, where Classic or Celtic races remained. While, on the other hand, there would have been no introduction of pure Classic or Roman to this side of the Alps, had there been any revival of it in Italy. Christianity alone would not have created Gothic, for it existed for ages after its emergence from the Catacombs without doing so. But while content in the hands of the Romans and Classic races with a pure Classic Romanesque or Byzantine style, in the hands of the Teutonic tribes it sought to give utterance in architecture to the new ideas and hopes which it inspired, and to reflect therein the new conceptions of the Deity and the high destiny of the soul, and so originated the Gothic system.

It was natural for the descendants of these Northern tribes to attempt the revival of their architecture a generation or two ago; a momentous event, if we consider its upstirring and awakening effect on the worlds of art and literature,—its relation to the new science of archæology and historic criticism, to ritualism, &c. All we have to regret is, that it was not taken up in a more enlightened spirit; that its revivers did not more carefully forecast their enterprise, so as to commence from the truest or best starting-point, and in the right direction. At first sight it might seem most natural to have begun where the Mediævalists left off in the



NEW [SYNAGOGUE, PETERSBURG PLACE, BAYSWATER.——MR. N. S. JOSEPH AND MESSRS. AUDSLEY, ARCHITECTS.

sixteenth century; but as the stream had grown corrupted, and the later phases of it were not the best, the perfect Gothic of the Decorated period presents itself as the fittest nucleus, round which every beautiful element in other periods that would harmonise with it might grow, till nothing was lost. The most important point of all would have been to make the revived style reflect every modern circumstance that could or ought to influence it; and the changes in the general condition of society since the period of its discontinuance, brought about by the mighty events in the political, religious, and scientific worlds; which have impelled thought and enlarged the boundaries of the intellectual and moral worlds, with which the fairy-realm of the imagination, peopled by the deathless progeny of the poet, has kept pace. Nothing needed to be lost, for all the periods of Gothic present elements too valuable to be abandoned to oblivion; and the course here indicated would bear some analogy to that of the Bolognese School of the Caracci in painting, which aimed at uniting the perfections and charms of all the other schools,—the grace and sweetness of Correggio to the drawing of the Roman School and the colouring of the Venetian. It would be gathering from every period the scattered rays of truth and beauty, and making of all periods one copious treasury or fountain of elements, to be artistically and harmoniously recombined, as we combine words in literature, according to the laws of grammar, logic, rhetoric, &c.; so copious as to enable the architect to go "from grave to gay, from lively to severe," and embody every variety of character.*

This is truly using ancient architectural examples,—resolving them into their original elements, and re-using those elements as a language,—a sort of hieroglyphic language,—between which and literary language there is undeniable analogy: the latter has its more important words,—its roots, which are said to be the verbs, action being the primitive idea of each; and so has the architectural in its piers and arches, columns, &c. The architectural differs from the literary in being a natural language, while verbal language is an artificial or conventional one. It more resembles that primitive and untaught language of human beings by which they endeavour to express emotions or desires, and which consists of the action of the limbs, gestures of the body, and play of the features. It differs also from the literary language in this: its elements are more or less susceptive of the further impress of mind upon them; and in the process of being re-used or applied to a new purpose by a true artist, they cannot escape the influence of his judgment and taste, feeling and fancy, which go to give the work into the constitution of which they enter a claim to originality,—a quality that follows naturally upon the exercise of artistic mind.

Some few elements of this great treasury would be unimprovable, and to touch them with an eye to refinement would be like gilding fine gold, but most of them would be susceptive of the artistic stamp. Some could be pointed to which should be looked upon as well-nigh obsolete. Such, for example, is the Lancet window, the step from which to the Decorated is one which no artist should dream of retracing; which is as if a painter went back to the primitive monochromic method of his art. It is employed, I believe, for its simplicity and cheapness; but a church may be very simple and inexpensive with some of the graces of the Decorated window, without which Gothic is but faintly Gothic. Salisbury Cathedral is, I own, a building of great beauty; but it owes it not to the Lancet window, and would have been a finer building had it been as uniformly built after the Lancet window was superseded. The latter, however picturesquely grouped or originally treated, bears no comparison to the broad-mullioned, tracery-fraught window,—the glory of the Gothic style,—which is the most favourable to the highest qualities of architecture, and the introduction of which should have sealed the fate of the Lancet window for ever. For a very humble village church a Lancet window may be fitting enough, but surely it was a mistake of some architects awhile ago to introduce it into the designs for a cathedral.

The style could scarcely progress in the present day so steadily and uniformly as in the Middle Ages; individual mannerism would here and there betray itself. It must characterise the modern age. One artist, I suspect, would have a peculiar feeling for this feature, another for that. But the style would advance and modernise itself, nevertheless. The conduct of art is different from that of science: in our inquiries into the laws of the universe, it is important, following the precept of Lord Bacon, sternly to destroy all idols of the intellect; in the pursuit of art idols of the intellect and the imagination may and must be utilised. That the style in question can modernise and adapt itself in the way I am endeavouring to indicate is proved to me by the fact that I have, more than once, come upon a modern Gothic church that has charmed me like a Mediæval example. Exhibiting the impress of modern mind on Mediæval materials already consecrated by lofty and endearing associations, it has been like the first glance and tone of love,

> "New, as if brought from other spheres,
> Yet welcome as if loved for years."

One of the most notable effects of this truthful treatment of the revived style would be the disappearance of the warlike character which, to the last, was worn by the Mediæval Gothic, rendering churches and cathedrals semi-castles; and the reflection of the more peaceful character of the modern age, as well as the true genius of Christianity. To this nothing would more contribute than the suppression of embattled parapets, and introduction of those aspiring features the most contradictory of earthly strife and ambition, and symbols of piety—pinnacles and spires, which point as with silent fingers to the sky and stars, and sometimes, as Wordsworth remarks, when they reflect the brazen light of a rich sunset, appear like pyramids of flame turned heavenwards.

Another result of truthful treatment of the style would be the exhibition of the utmost refinement consistent with correct expression of character, which should be sought in a vertical style as well as in a horizontal one. Northern Gothic, as well known, owes much to the works of the Saracens in Syria and Egypt, through the Crusaders; and probably to the Italian Gothic of such edifices as the cathedrals of Orvieto and Sienna, as well as to the beautiful offspring of Saracenic and Byzantine,—the Venetian Gothic. I believe Northern Gothic might be still more indebted to them for delicacy and beauty, and would be if architects generally imbued their minds with those southern and Oriental styles to the extent which they deserve.

But it is the Classic which most imperatively demands its part in the modern Gothic, it being amongst us and about us. Styles can no more escape each other's influence than human beings; and the two styles in question are prone, not only to influence each other, but to mingle, as they did in the Elizabethan. I think that mutual influence, at least, should be encouraged, which it can only be to good purpose through the uniform, impartial culture of architects, which is in itself desirable. The Gothic practitioner of the present day will be an imperfect architect if he turn his back on the style in which alone purity and grace in detail was carried to perfection by the Greeks, as will the Classicist who slights the style (Gothic) in which picturesqueness of outline and composition completed its climax; and whose monuments amongst us should render our Classic more picturesque than it would otherwise be. A Gothic practitioner should acquire such knowledge of and feeling for the Classic that it would become, not merely the furniture of his mind, but a part of his mind itself. It is essential to his education as an architect, as well as to his duly proving the capabilities of the Gothic style, which I hold may unite all the grace of the South to the vigour of the North. I am persuaded the utmost Doric delicacy, including the application of diminution and entasis to piers, would long ago have been introduced, but for undue influence of precedent, and forgetfulness of the paramount claims of beauty in art, which, as the symbol and shadow of God, should be secured in His temple, as well as expression of religious ideas.

A third result of the course here indicated would be the exhibition of a truer appreciation of sculpture, which, in more directly appealing to human feeling and intellect than architecture, is an inlet into it of higher qualities. There are some practices of the Mediævalists, in their application of sculpture, which should be looked upon with caution; for instance, they were not careful to introduce their statues so as to relieve the rectilinear forms of the architecture, and increase the variety and harmony by their diagonal and curved lines. While, on the other hand, they sacrificed sculptural beauty to the conveniences of the architecture, as when they bent the human figure round archivolts, or placed it radiating, as in the entrance to the nave from the cloisters of Norwich Cathedral. Sculpture deserves better treatment than this. It deserves ample spaces, wide-enough niches, where its beauty and capability could be fully developed, and which there is nothing in the nature of the style to forbid. If it demand drapery, so much the better for the statues, for draped figures always look more dignified than naked ones, and certainly more proper. Nude statues were in harmony with the naked spectacles which, at the Olympic games, corrupted the manners of the Greeks, and, as noticed by Gibbon, banished from the stadium the virgins and matrons, but not with Christian manners or morals. Besides which, statues may be so draped as to lose little of their beauty of form, which is highly important. Sculpture having but one power, the power of pure form, with which to captivate, that power should not be sacrificed, as it was in the Mediæval sculpture, to expression. Expression, which is beauty in action and passion, is important in Gothic sculpture; but the artist should bear in mind the grand law of the art, which requires the infusion into his statues of the greatest amount of life and thought with the least deviation from beauty. In great buildings where means are sufficient for the employment of the highest minds upon it, the embellishment may include the divine in human form, even ideal beauty; for I hold that, as in the Greek, the sculpture introduced into Gothic may be of the very highest kind.

As sculpture can breathe in other materials than stone, I cannot see why statues might not be of a different material from the building, as bronze; nor do I see why they cannot, while adorning architecture, be often made to snatch from oblivion the lineaments of real demi-gods and heroes, benefactors of their race, as portraits.

Another result of truthful treatment in the revived style would be the exhibition in it of more refined and higher religious feeling on many points than that shown by the Mediævalists. It has, I am aware, been usual to speak despairingly of religion having any influence at all on architecture now. But as religion exists still, I cannot see why it should not be the muse of the modern architect as it was of the Mediæval, and of the pre-Raffaellite painters of Italy of the fourteenth and fifteenth centuries, if it is not to be with us a mere theological notion or name, but a vivid mental image, living in the imagination and swaying the heart. True religion links man to the divine nature, and, as nothing takes so firm a hold on the imagination as the superhuman, nothing should be so vividly reflected in works of the imagination, or have a more hallowing influence on them, especially on those dedicated to the Deity, whose presence therein, bodily or spiritual, the Christian architect must believe in.

Gothic architecture cannot dispense with an inspiration to which she almost owes her existence, and of which her great works seem the organic creatures; works which alone are sufficient to inspire the modern architect with something like the Mediæval enthusiasm. So much art and science were never before blended with poetry as in these creations, which are emblems of man's relation to the Infinite, and embodiments of Biblical poetry of superhuman grandeur. Our religion should not only inspire as lofty an ideal in architecture, and every possible excellence and glory of art, but it ought to secure its purification from everything gross that inferior manners and morals may have communicated, such as forms taken from the old Pagan mythology of the Northmen, and whims and jests of carvers and workmen. If it again animate the workman, and there is no reason why it should not, the better for the architect, the architecture, and himself.

Had such as I have faintly sketched been the career of Gothic architecture, to which I think a sufficient portion of the art spirit or genius, which, as fabled of the universal menstruum searched for by the old alchymists,

* In an early paper, entitled "The Nature and Extent of Originality in Architecture" (*Builder*, vol. viii., p. 305), I endeavoured, at considerable length, to show the fallacy of those who would cut every sympathetic link that binds us to ancient and foreign art, and make us, spider-like, weave all from our own minds. The value of the architect, as of every other votary of art or science, consists in rightly using the materials prepared for him by former men. The attempt to make a style that could take any hold on the human heart or fancy out of nothing, reminds of nothing so much as the project in "Gulliver's Travels," of extracting sunbeams out of cucumbers.—S. H.

can blend and harmonise the most discordant elements, would not have been wanting, every church erected by the humblest practitioner would of necessity have been in the style of the day, with some leaven of the nineteenth century in it; and we should not be every now and then hearing the strange anomalous announcement, in the public papers, of a church being just opened built in the style that prevailed in some quarter of some long-past century; showing that the style, instead of holding an onward course, was jumping about, maniac-like, backwards and forwards, to the dismay of its true and enlightened friends, and exciting regret that the different periods had ever been discriminated. Why, I would ask, is architecture alone of all fine arts or liberal sciences thus insulted? Why is not the sermon, for instance, preached on such occasion in the vein of St. Anselm or Thomas Aquinas, or in the language of Chaucer? This is not a development, but a perversion of the system, which should be neither Early English, nor Decorated, nor Plantaganet, but Neo-Gothic, as leavened by the art-feeling and judgment of the architects. If a new church is nothing more than an imitation of a certain phase of Mediæval architecture, — if the chief thing sought to be embodied in it has not been fitness or artistic beauty, but truth to a period, it should be announced that Messieurs Lancet and Perpendicular were the *archæologists* employed, not the architects. It might, I think, be laid down as an architectural axiom that any past-century architecture has no right to be erected in this.*

But archæology, the handmaid of history, has beguiled the noble art of architecture; seduced her into undue attention to her history, and the periods and changes of her styles, which have been a stumbling-block to the architect, causing him to lose sight of the end in the means, and aim at producing archæological specimens of styles rather than true individual works; the fruit in some measure, I think, of an over-reverence for ancient examples as something inapproachable by the intellect of our time, which paralyses invention, chills artistic feeling, and leads many who could achieve originality to mere timid imitation and copying, which is the bane of art. A youthful and ill-fated poet of the last century incurred almost universal obloquy for offering a new work to the world as an old one; yet it is greater treason against the cause of progress to pass off an old one as new.

This is bad enough, but worse remains to be deplored: the churches produced or reproduced within the range of the Pointed Gothic are embodiments of fitness itself compared with what has been done in emulation of the Norman, which is the great-grandfather at least of the last Gothic; the style that grew into the Lancet, which grew into the Geometrical, which changed into the Perpendicular. In going back to this patriarchal style, all fitness and duty to the present day is out of the question, as much as it would be in going down to the style or styles of the 20th degree of latitude. Yet churches in the Norman style are still constructed.

There is a large and well-built church I visited lately, in a remote part of England, erected but a year or two ago, wherein, owing to the smallness and fewness of the windows, the congregation worship in a sort of twilight; and, from the presence of a double row of thick-set piers of the proportions of barrels, more than a third of them are unable to see the officiating clergymen; while for want of modern folding doors, that can be readily opened and closed, they are during some portion of the service, exposed to cold; simply because the necessities of the times and infancy of constructive skill led the Normans 800 years ago to build the kind of structure of which this is a reproduction. It is exactly suited to a state of society the very reverse of that for which it was built,—to a period of lawless violence, in the iron age of feudalism and chivalry, the time of the curfew, and trial by wager of battle, when every part of England was studded with strongly-garrisoned castles, and, owing to foreign invasion and intestine war, the whole of the country, from the Humber to the Tyne, was one wide waste. It has not one feature in recognition of the spirit or requirements of the present day, or its own special purpose, which were not allowed to have the slightest influence on its plan, details, or furniture. The congregation was a company of refined English people, accustomed in their homes to all the conveniencies, comforts, and decorations of the day, but the church has coarse sandstone walls, bare oak-benches, and rude broad oaken doors, all of a piece, and too unwieldy to open and shut as weather might require. Its purpose,—Protestant worship,—required abundance of light to enable the congregation to read their small-type hymn-books and prayer-books and pocket Bibles on the cloudiest winter day; but it was adapted to Catholicism of the eleventh century, when much light was not needful, as nobody but the priests could read, and when large windows might be dangerous. The latter, in consequence, being reduced to well-splayed loop-holes cautiously widening a little in the clearstory, the congregation seemed as if expecting an attack of bowmen. They were, of course, not really afraid of such attack; but as the Norman or Norman and Saxon congregation 800 years ago were probably afraid, in order that the church may be a correct specimen of the eleventh-century style, they must *appear* to be afraid.

Seriously, here is an example of art-perversion one would scarcely expect to find so late as 1878, or after so much experience and criticism. Probably nobody sees this more clearly than the architect who was employed upon it. But he has weakly followed the public or perhaps clerical taste instead of guiding it. Such a church has no more business in any British city of the present day than a model of the ancient trireme, or of Noah's Ark would have in the English Channel instead of an ironclad. If a living dog is better than a dead lion, the humblest cottage or grocer's shop adapted to its purpose is a more respectable object than this nineteenth-century church built in a style that the thirteenth century justly abandoned as unfitting and semi-barbarous, and never for a moment looked back to. Fancy the Athenians building their temple to Minerva, on the close of the Persian war, in the style of their Pelasgian ancestors before the Dorian invasion of the Peloponnesus, or the Romans rearing their Pantheon or Colosseum in that of the Etruscans, and you have an idea or image not much more anomalous. The authors of this church ignored the true artistic use of the Norman works, which, imperfect as they are, throw light on the conditions of architectural energy and grandeur, and they forgot the true nature of style,—that the course of architecture is to create style, not to conform to or copy it. A chart of the glorious past of architecture would present the architectural styles of the world, all changing character with their position as they range geographically from West to East, or descend chronologically from the night of antiquity to the present time, and each reflecting the race, religion, time, place, and climate to which it belongs; and passing into another style in the course of ages by the acquisition of new features or elements, not unlike what is predicated of plant and animal species in the Darwinian theory; which shows at a glance that style is the offspring of circumstances, and not a cause, but an effect. Such a chart would exhibit the Early English flowing out of the Anglo-Norman, as the French Pointed rose out of the Frankish, and the German Pointed out of the Round Gothic. The Normans altered their style to follow the slightest change in the manners and state of society. They altered it till it became what is called Semi-Norman, or Transitional. Why, after nearly a millennium of growing advance upon everything else in their time, should any educated people be found so inferior in taste and knowledge to them as to tempt architects to such acts? But why cannot architects be as faithful to their intuitions, as independent and as free from the influence of precedent and patronage, as artists ever were in any period of the world? If patrons solicit them to such folly, on the one hand, nature and their own genius solicit them on the other. Nature's perpetual admonition to them is, "The world is new and untried, do not be satisfied with the past; I give you the universe a virgin to-day."

To work truly and hold a real relation to architecture is worthy the highest ambition, since every new and truthful design contributes to the stream of its progress, and sheds a ray of lustre on its already illustrious career. Let English architects remember they are collectively writing a chapter honourable or dishonourable in the history of architecture. The advancement of our nature both in ourselves individually and as regards the human family, is scarcely more a sacred duty than aiming at real progress in an art so potent as architecture for good or ill on the public mind. The career of architecture should exhibit throughout analogy to the course of human history or nature in history, which, it is well said, has a higher end in the production of new individuals than security, viz., ascension, or the passage of the soul into higher forms. So did ascend the soul of architecture from the archaic piles of Karnac and Luxor, through the Temple of Corinth, till it reached its highest manifestation witnessed by the ancient world in the Parthenon. Let the soul of architecture experience a similar ascent in the revived Gothic of Great Britain.

All architects, I am aware, cannot have any great degree of inventive power, or wield the mighty imagination which, with the epic muse of poetry, can call new worlds into existence. But all may cultivate earnestness of thought, and love for the beautiful and true, which are the objects of their art; and there is a power residing in these alone the force of which is incalculable. Human love has been the muse and inspiration of the greatest poets, as a higher and diviner passion has been the one animating principle of the lives of eminent saints, breathing through their every look and gesture; and led to sentiments and deeds that seem superhuman. The principle is the same, only qualified by its object. The one in question is surely not an unworthy one while pursued in its right place. The enthusiasm for it is increased by the force of example. Architects and artists of all branches, and, I may add, votaries of literature and philosophy, may catch fire from each other's eyes, which is the chief use, as it gives the chief value, to artistic and learned societies: to breathe an atmosphere of enthusiasm among their members, who inspire, rather than teach, each other. This enthusiasm, with ordinary faculties—memory, taste, and judgment, may do much in architecture.

Since penning the foregoing, a recent article in the *Builder*, entitled "Popular Criticism as applied to the Architectural Profession," which I had not before observed, has suggested an additional remark or two. I think popular criticism on architecture is of little value to the profession; for I hold firmly that none can criticise architecture but architects, or such real amateurs as have taken up the subject in the love of it, and given long years to its study. Those who have not, however otherwise eminent, are liable to the most egregious errors, as witness those of Addison, Pope, and Swift, on the works of Vanbrugh, which should be a warning to non-professional men how they attempt to arraign the architect, or guide the current of architecture.

But I believe that a profound ignorance prevails of architecture among the public to a degree that ought not to exist on an art the creations of which are so poetic and romantic—so calculated to elevate and refine the public mind, though many fancy themselves wise on it. Almost every man that has been to Italy becomes a Sir Oracle in styles and orders, when, perhaps, he only proves,—

> "How much a dunce that has been sent to roam
> Excels a dunce that has been kept at home."

The greatest difficulty of the non-professional man when he attempts with only a *cramming* preparation to write or lecture upon the subject, must be to disguise his profound ignorance of it.

As to the unfavourable tenour of recent criticism, I believe that despite all shortcomings, there is a vast amount of industry, talent, and enthusiasm in the architectural profession—and that a great proportion of it are accomplished men, who are proud of their vocation, and doing their best to honour it. I judge by experience and observation chiefly provincial. Degradation there is, and in high places of it; but I for one see no good reason for mourning in sackcloth and ashes, as has been suggested, over the general career and state of architecture. For grief so extravagant I think a more just public cause could be found.

Sir Edmund Beckett would probably have spoken more respectfully of architects in his "Book on Building" if he had known the greatness of their art. The charge of unconscientious conduct can no more justly apply to the architectural than to any other profession, and should not be levelled against any entire profession. It is opposed to the highest Christian precept and example. Ten righteous persons, had they been

* It is some relief to find that Italy, "the hot-bed of art," is not going on in a much more enlightened spirit, if we may judge by the published illustration of the new church at Lonigo, Venetia, a very graceful composition in itself, but obviously too much of a re-production of certain celebrated Middle-age examples to satisfy a travelled Italian, to whom it must be a very familiar form. How are the mighty fallen!—S. H.

found in Sodom, would have saved the city. It will be best met, however, by each member taking more heed to his ways, and walking with increased circumspection. Let him,—

"Still achieving, still pursuing,
Learn to labour and to wait,"

and out of evil will come forth good.

SAMUEL HUGGINS.

THE POTTER'S ART.

MANY readers of the *Builder* must have been interested in the recent notice of the manufacture of pottery-ware in Japan, and a few days since of the process in use at Lambeth. The contrast is great, but not greater than that between a choice specimen of Japanese ware, and a stoneware socket-pipe of Lambeth, turned out of a machine at the rate of fifty per minute.

Full of interest is a contemplation of the various methods adopted in the construction of pottery. Recently entering the Royal Academy, my attention was arrested in the first room by the picture, No. 53, "Women moulding Water Jars, Algeria," by Mr. Edgar Barclay. Having regarded the picture for some time, I could not refrain from doing so still more closely, from an exceptional, *i.e.* technical point of view. I thus noted that the Algerian potters are women. I was aware that women were the potters of Central Africa; there, however, a wholly different process is followed. No wheel is used, nor, apparently, any rotary motion, neither that adopted elsewhere in Africa, nor that used in forming the Indian ghoora, or water-bottle. Notwithstanding, the vessels appear perfectly symmetrical. The process appears to be one of building up the sides or walls of the vessel. The sides are remarkably thin, relatively to the size of the vessel and the mode of construction, which demonstrates the extreme plasticity or toughness of the clay, and the great skill of the potter.

The very early specimens of vessels built up by hand, and which are found in numerous grave mounds in this country, are mostly unsymmetrical, very thick, and very clumsy. Nor did that clever rogue "Flint Jack" succeed in his pottery amongst the cliffs at Whitby in greatly improving upon them, nor, in fact, even rivalling them. Neither does the Stornaway pottery ware, constructed by hand without any rotary action, greatly excel Flint Jack's productions, and though still in common use in the Hebrides, is most uncouth and rude in form and workmanship, and cannot in any way compare with this Algerian pottery.

Desiring further information, I ventured to write to Mr. Barclay respecting the subject of his picture. He has most courteously replied to my inquiries. Mr. Barclay writes, — "The pottery represented is made only by the Kabyles or mountain tribes, who were never subjugated by the Arabs, and, until conquered by France had been free from time immemorial.

It is made exclusively by the women, and chiefly in the summer time. After the corn and fig harvest the heat is intense, and there being little labour in the fields, the women are thus occupied at home. A certain amount of pottery is, however, made in some villages all the year through. The subject of my picture was taken near Fort National in the spring time, but other tribes further removed from French settlements are more noted for this pottery.

I have also visited these tribes, and the mode of manufacture is the same everywhere. The cleaning and preparing of the clay I did not see; all I know is, that it is very roughly prepared. A store of clay was kept in a cool, shady place in a house, and a young woman on beginning to model the vases chose a smooth convenient spot for the purpose out in the sunshine, and had the clay handed to her in small quantities as required, so that it was always of the same consistence. She kept a basin of water by her side, into which she dipped her hands, but had no tools whatever. She commenced by making a rough saucer as a sort of stand, and then built a solid pedestal of clay in the centre of it, the lower point of the future amphora-shaped vase, which now very quickly began to rise as she kept moving slowly round and round, skilfully adding clay and smoothing it into shape with her hands, and keeping the rising vase remarkably true in shape. Each new piece of clay when added she supported in position with her left hand as she smoothed it round into shape with her right. Having started one pot, she forthwith commenced another, and then another, keeping four going at the same time by turns. When the modelling of all four vases was completed she sat down and began modelling on the handles. These amphora-shaped water-vases are carried on the back, and the object of the point is to fix it in the girdle, and thus steady the vase when being carried. The day's work of this young woman was the making of four of the large vases, and she had plenty of time to chat with her neighbours, who, occupied in various ways, came and sat down round about her. The vases were very truly and neatly made; they looked to me too big, but I suppose they would shrink considerably in the drying and baking. In the evening they were all carried in the saucers into the courtyard of the adjoining house for protection, and were left to dry.

I saw various such vases with a waxy and polished surface lying in the sun, and was told that the next process the vases I had seen made would undergo would be the waxing of their exteriors. After that they were painted. I saw a woman thus engaged sitting on the floor of her house,—a good subject for a picture: she covered portions of the vase with a thick red paint,—some earth mixed simply with water; I did not understand what earth it was, and do not think she knew herself, for all I could get out of her was that she had bought it. To finish, a quantity of ornamentation, in a rich black colour, is added, drawn on with a rude brush with considerable precision, all the patterns being geometric in character, or obtained by combinations of straight lines. The brush was without a handle, simply a sort of pointed whisk of hairs bound together at one end. This last colour is, I fancy, the same as Arab ink, a rich brown black, somewhat glutinous in character, and prepared somehow from burning the refuse and fatty parts of skins. The pottery is lastly baked in the rudest way possible. A fire being lighted in a round shallow hole made in the earth and the pottery placed on the top. I once saw this performance going on, and felt surprised that the whole of the pottery did not come to grief; it does not, however, but being imperfectly baked it is very brittle. This I learnt to my cost, for I had some packed, being anxious to bring specimens home with me, but three-quarters of them were smashed on arrival in London. The only good collection of Kabyle pottery that I have seen is a museum at Algiers; it shows a great deal of invention in patterns, and a very remarkable variety of design in the way of quaint shapes and combination of form.

The lamps are among the most curious of these productions, consisting of rows of little cups, in tiers one above another, each little cup being filled with olive oil, and pointed to receive a wick, all being curiously joined together, and supported on a single stand, with a handle at the back to carry it. In their houses the Kabyles build up immense jars of clay over 6 ft. high, and rudely ornamented, the object being to secure their stores of grain and figs from vermin. I was one day occupied in sketching the pottery in the museum mentioned, when two American gentlemen entered, and one of them exclaimed, with much astonishment, 'I have seen vases exactly like some of these among the Indians of Brazil.' Some pieces of ancient American pottery exhibited in the British Museum might very well have been made by Kabyles, so great is the similarity of character. I have also seen very ancient Phœnician pottery and vases dug up at Cyprus and other places remarkably like. Such resemblances in primitive manufactures in various parts of the world, having no possible communication with one another, seems to me full of interest. To conclude, I will quote a passage that struck me in Commander Cameron's book, "Across Africa," where he describes a woman near Tanganyika Lake, making pots, and says that they make them of an amphora shape, such as I have represented in my Academy pictures.

I was much interested at Kisungi by watching a potter at her work. She first pounded with a pestle, such as they use in beating corn, enough earth and water for making one pot until it formed a perfectly homogeneous mass. Then putting it on a flat stone she gave it a blow with her fist to form a hollow in the middle, and worked it roughly into a shape with her hands, keeping them constantly wet. She then smoothed out the finger mark with a corn cob, and polished the pot with pieces of gourd and wood, the gourd giving it the proper curves, finally ornamenting it with a sharp-pointed stick. I went to examine this work, wondering how it would be taken off the stone, and the bottom shaped; and found that no bottom had yet been formed. But after the vessel had been drying four or five hours in a shady place, it was sufficiently stiff to be handled carefully, and a bottom was then worked in. From beginning to pound the clay till the pot, holding about three gallons, was put aside to dry, occupied thirty-five minutes, and providing it with a bottom might take ten minutes more. The shapes are very graceful and wonderfully truly formed, many being like the Amphora in the Diomed at Pompeii."

There *may* be readers of the *Builder* who know of other localities where the apparently natural order of Pottery is reversed, the clay being immovable, and the potter working round it.

FELDSPAR.

A VAST BUSINESS AND ITS NEW HOME.

LONDON abounds in great extensions and developments of commercial and manufacturing concerns, and of institutions of divers other kinds. One of the narrowest and most unpretending frontages in Ludgate-hill,—the entrance to the offices of the Prudential Assurance Company,—suggests an illustration of the truth of the remark. The magnitude of the business of this company, as regards the number of policies it has issued, and the rapidity with which the business has been created, are, we believe, without parallel in the history of life assurance. Originally the front block of building sufficed for the accommodation of the company's staff and the transaction of its business, which increased, however, so rapidly that more room soon became a necessity.

The long-galleried court-yard of the celebrated coaching inn, La Belle Sauvage, where "Tom Brown" was put down on his way to Rugby, was, many years before the "Tabard" in Southwark, and other hostelries of the same kind, adapted to modern uses. Messrs. Cassell, Petter, & Galpin, printers and publishers, occupied at first part of one side of the yard, and eventually nearly the whole of the lofty buildings on both sides; but their business outgrew their accommodation, and they erected to the rear of La Belle Sauvage-yard a large new printing establishment, round a glass-roofed quadrangle, an establishment that is quite unique, and one of the most perfect of its kind probably in existence. Messrs. Cassell & Co. retain one side of the yard for warehousing and other uses; but their new premises enabled them to vacate the buildings on the opposite side, of which the Prudential company gladly entered into possession, and made the necessary communications with their front building. Their premises now extend from the front in Ludgate-hill to a point well back in La Belle Sauvage yard. Large though the premises be, and great the amount of floor area, they are again inadequate for the accommodation of the business, and of the crowd of *employés* that make the place as busy as an ant-hill, as may be easily believed when it is stated that the officers, clerks, book-keepers, messengers, &c., in occupation of the premises number fully 500 persons in all, including about 150 lady-clerks, by whom congenial and suitable duties are, as a rule, effectively discharged. The company would have preferred to remain in the situation they now occupy; but such a fabulous price was asked for adjoining property they wished to acquire, that they were under the necessity of looking elsewhere for the accommodation they needed, and hence their purchase of the large plot of ground at the junction of Brooke-street with Holborn, and the erection of a large, lofty, and stately pile of building, upon the occupation of which, as offices, they are to enter soon. The extent of the accommodation in the new offices is very much larger than the company could have hoped to acquire at Ludgate-hill, and this at a considerably lower cost.

The new building is by Mr. Waterhouse, A.R.A., and affords a good example of the capabilities of terra-cotta in ornamental façades. The Holborn elevation is about 80 ft. wide, and the side elevation to Brooke-street about 180 ft. long. The greater portion of the buildings have six floors, including the basement and the uppermost floor, which is lighted by dormers. The fronts are relieved by oriels and gables. Two ventilating-shafts break the sky-line; the high-pitched roofs, surmounted by ornamental ridges, are also carried to different heights. Once into their new home, the Prudential will for years to come have "ample scope and verge enough"

for the efficient and convenient transaction of its immense business, and will not have, for some time to come, occasion for enlargement or another house.

The marvellous success of this company is probably attributable to several causes: (1) enlarged experience, and the acquisition of exact data whereon to base life assurance business; (2) energy, enterprise, perseverance, and skill in management; (3) employment of suitable means for pressing home the claims of life assurance upon different classes; and (4) especially the facilities afforded to persons of limited means to avail themselves of its advantages.

The history and experience of the Prudential contrasts curiously with those of some of its elder brethren. The only office in existence at the beginning of the last century that granted assurances on single lives, did so for a uniform premium of 5*l.* for every 100*l.* assured, on all lives under forty-five years of age! Experience has enabled the Prudential to take the risks at equitable graduated amounts, ranging from 1*l.* 11s. 1d. per annum for an assurance on a life at sixteen, to 3*l.* 8s. 11d. for an assurer aged forty-five, with a different amount for every intervening year. These rates are without profits. Again, another highly respectable office, that commenced business about the middle of last century, opened with four policies; at the end of the century it had 5,124 policies in force. The first policies of the Prudential were issued in 1852; its business is divided into two branches,—the "Ordinary" and the "Industrial." At the end of 1877, that is after twenty-five years' work, it had 17,751 policies in force in the "Ordinary" Branch, assuring 2,555,091*l.*; and in the "Industrial" Branch, 2,643,665 (now 3¼ millions) policies assuring 22,303,959*l.* The annual premiums on the two classes of business were 93,352*l.* and 1,227,803*l.*,—together 1,321,155*l.* The number of policy-holders is increasing at the rate of 30,000 per week. The company has agents in all parts, England and Wales, Scotland, and Ireland, among whom business is interchangeable. Some active agents collect the premiums weekly upon as many as 10,000 policies.

The Prudential Company seem, from the facts as regards the number of their policy-holders, to be justified in pronouncing it "the largest Life Assurance Institution in the world."

OPTICS AND GEOMETRY OF ARCHITECTURE.

SIR,—One or two points occur on the perusal of the excellent articles on "Geometry and Optics of Ancient Architecture" (pp. 685 and 739 of the *Builder*), the discussion of which may add to the value of articles of great research. The first of these, and the only one in which the writer of the article will find occasion to reconsider a statement which, while *per se* not to be contradicted, is rather hasty, is about the Egyptian canon of proportion. A single example, it is true, may not indicate the existence of a canon. But we are not confined to single examples. Lepsius states that three distinct canons of proportion were successively adopted by the artists of Egypt. Prisse d'Avennes, in the magnificent work on Egypt, which was aided by the subvention of the French Government, reproduces several examples of the rectilinear mapping out of a wall in equal-sized parallelograms, with a view of exactly producing the human proportions adopted as normal. He classes them in two groups,—those of the old canon, obtaining from the time of the fourth dynasty to that of Psamtek I.,—a period of more than 3,000 years,—and those of the new canon, which were used for a period of about one-fourth of that duration, down to the time of Caracalla.

In the old canon, the height of the figure is divided into nineteen parts, and the surface of the wall on which the representation is made is ruled into equal squares. The head occupies three of these divisions. There is no visible neck. The body, from the chin downwards, is divided equally between trunk and legs; the latter, however, being proportionately longer in women. The length of the foot, which is always drawn in profile, is equal to the height of the head. Thus, if either the head or the foot be taken as a modulus, the whole figure, measured by such modulus, is as 19 to 3.

In the new canon, the total height is divided into 22 parts, 4 of which are equal to the length of the foot. The head measures about 3¼ parts, or between 3 and 4. Thus the proportion has been changed from 19-3rds to 22-4ths. In the figures of this period there is a visible throat. For gods and royal personages lofty head-dresses are added, which reach to the top of the 26th square, giving almost an additional head of height to the figure at the first glance. The height of a seated figure on this system is 18½ squares.

It appears from the study of Egyptian sculpture, and of that koilanaglyphic work, as it is called, or heightening of low relief by strong colour, which is so prevalent an enrichment of the walls of Egyptian temples or tombs, that certain conventional modes of expressing personal qualities were universally adopted. The figures, indeed, may be regarded as hieroglyphics. They are rather diagrams than pictures. Thus, the width of the shoulder—always represented in front,—and the length of the foot—always given in profile,—denote strength. Grace was sought by reducing the size of the waist, and by lengthening the legs at the expense of the trunk. Majesty is added by a towering head-dress. In the old canon the shoulders are six squares wide, or $\frac{6}{19}$ of the height: in the new they are $\frac{7}{22}$. The knee is at the fifth square, counting from the ground, in the old canon; at the sixth in the new. The end of the trunk is at the eighth square in the former; at the tenth for men, and the eleventh for women, in the latter. The width of the waist is always less than the length of the foot. On the tomb of Rameses III., a king of the twentieth dynasty, at Medinet Habou, are to be found colossal figures of the nature of caryatides. Strength is the idea here sought to be indicated; and the length of the feet is actually as much as two-ninths of the entire height. Between these colossi are children, with feet of the proportions usual according to the second canon.

The other point as to which attention is called is with reference to the point of sight. It does not fully appear how Mr. Pennethorne considered that this was determined. Without having access to his work, it is not certain whether the omission is his fault, or whether I fail to follow the argument correctly. He speaks of an angle of 45° being subtended. Is this intended to apply both to vertical and to horizontal range? In either case it appears to me to be far too open an angle. For vertical proportion, for example, an angle of 45° places the spectator at a distance from a building of its own height. Surely this cannot be regarded as that distance at which the proportions of the edifice will produce the finest effect on the imagination! In his treatise on linear perspective, Leonardo da Vinci says,—"You must be distant from your picture twice the size of it"; and it is clear from his reasoning that he is here giving a minimum distance. This rule will give an angle of 33° instead of one of 45°, and the further increase of the distance to three times the height of the object, and to an angle (in rough figures) of 20°, will be found, I submit, generally speaking, far more suitable for the spectator than a standpoint giving an angle of a more obtuse nature. Again, the rule of Leonardo, that the point of sight ought to be on a level with the eyes of an ordinary-sized man, is entirely inconsistent with the idea of looking at an architectural elevation, of which the sight, measured on a vertical plane, would subtend an angle of 45° at the eye of the spectator.

With reference to the horizontal angle, the subject has been very little studied. From personal observation of an unusual kind, I can state with certitude that the angle of convenient horizontal vision differs with different observers. It is probably purely dependent on the distance between the pupils of the eyes. I believe, though I cannot assert it as a fact, that vertical lines, when at a certain distance on either side of the central line of sight, assumes a curved form on the retina. Whether it be from habit or from any other cause, the eye can more readily detect any departure from the perpendicular,—when an object is in the centre of the field of view,—than from the horizontal. The workman looks *along* the surface which he planes, in order to be sure that it is out of winding. He looks *at* the quoin of his building, and rarely requires to get it out of winding with a plumb-line.

There is one experiment, which may be readily made, by any one who is on the seashore by moonlight, which throws much light on the question of the capacity of the eye to estimate the accuracy of a vertical line, as compared with that accuracy when applied to a horizontal line. The shimmering sea horizon appears level. At least, it does so to the great majority of persons. Now, let the spectator lay his head on a table, so that the line of the horizon becomes vertical, or, at all events, is at right angles to the line joining the axes of the eyes. The curved form of the earth will be immediately visible. The experiment is as beautiful as it is simple. How much of the results may be due to habit may be questioned. But it is not probable that habit has much to do with it, for this reason. Persons who look on the sea for the first time do not observe it to be curved. The universal impression produced is that it is flat. We have to educate the eye, by the phenomena of ships or other moving bodies, and to convince ourselves, in spite of the first impression on our vision, that the sea *must* be curved. "Parallax" even now is loud in his assertion that it is not.

The cause of this phenomenon I hold to be, that the vertical range and play of the combined vision of the two eyes is greater, or more easy, than the horizontal range or play of the double vision. If a suspicion strikes us that a portion of the side of the field of view is "out of drawing," we directly turn the central line of vision upon it: we lose the sideway effect, nor does it seem possible to arrest it. For vertical range, on the other hand, it is extremely probable that the sense of weight, and the unconscious effort of the human figure to maintain its own perpendicular, have much to do with our instinctive perception of a vertical line. And yet, if we take the mode in which the tapestry decorations of churches are now so often suspended by devout female hands, it is by no means sure that this instinctive perception of the vertical is universal.

The little table given (p. 740, 2nd col.) is unanswerable. But it would add to the value of the article for a little information to be added, as to the distance of the point of view drawn by Mr. Pennethorne, and the distance of the point of view that would be chosen by an intelligent student, after exhaustive study of the subject.

F. R. C.

ADDITIONAL WORKS SELECTED BY THE PRIZEHOLDERS OF THE ART-UNION OF LONDON.*

From the Royal Academy.—"Richard Savage," Wm. Holyoake, 200*l.*; "Llanberis Pass, North Wales," S. R. Percy, 150*l.*; "Through the Village," F. E. Bodkin, 60*l.*; "The Glen—October Morning," T. B. W. Forster, 50*l.*; "Old and Young," J. White, 45*l.*; "Sunken Road, Brittany," W. Bolton Jones, 40*l.*; "Glenfinlas—October," J. H. Oswald, 40*l.*; "A Gray Evening,—Cornish Coast," C. Smith, 40*l.*; "Whitley, Surrey," J. E. Grace, 35*l.*; "An Old Farmhouse," N. O. Lupton, 35*l.*; "The Hiding-place," H. H. La Thangue, 30*l.*; "Dort, Holland," C. Thornely, 30*l.*; "Autumn," J. Fulleylove, 25*l.*; "Autumn by the River Dane," R. Norbury, 25*l.*; "The Iris-pool," J. L. Pickering, 25*l.*; "View of Fontainebleau," J. Thors, 25*l.*; "Monastery Stairs, Munich," W. Blackman, 20*l.*; "Antwerp by Moonlight," A. Bellin, 20*l.*; "A Salmon-pool on the Aune," G. Harvey, 20*l.*; "Harvest Weather," H. Hume, 20*l.*; "The Point of Attack," R. S. James, 20*l.*; "Witness my Hand and Seal," E. B. Leighton, 20*l.*; "The Shores of the Hebrides," J. O. Long, 20*l.*

From the Society of British Artists.—"Windsor Castle,—Morning," Geo. Cole, 100*l.*; "From the Sunny South," J. C. Waite, 75*l.*; "A Trout Stream, North Wales," A. Glendening, 60*l.*; "An Old Mill, Castleton, Braemar," A. Panton, 30*l.*; "He's Gone!" J. R. Ashton, 25*l.*; "A Scene in Berkshire," C. L. Coppard, 20*l.*; "Autumn," W. S. Jay, 20*l.*; "Harvest-time," A. Vercy, 20*l.*

From the Crystal Palace Picture Gallery.—"In Surrey," J. Peel, 75*l.*; "A Dealer in Ancient Furniture at Antwerp," H. Schaeffels, 75*l.*; "Autumn Evening," H. Deiters, 60*l.*; "Fog Lifting, Coast of North Devon," J. G. Naish, 60*l.*; "A Peep at the Trent, near Ingleby," G. Turner, 55*l.*; "Rovil Roses," J. C. Waite, 53*l.*; "Autumn," G. Oeder, 45*l.*; "My Model's Opinion," Miss E. Conolly, 36*l.* 15s.; "At Coutances," A. Montague, 35*l.*; "A Country Road," G. Oeder, 35*l.*; "A Juvenile Cricket-match," D. Payne, 35*l.*; "The Path to Scale Force, Cumberland," W. Williams, 35*l.*; "A Sussex Woodland," J. Godet, 30*l.*; "Tide on the Turn," S. Walters, 30*l.*; "Dawn of Day, Isle of Man," T. S. Croxford, 25*l.*; "The Matterhorn, near Zermatt," S. Hodges, 25*l.*; "Stonor-hill, Hampshire," M. Snape, 25*l.*; "The Old Bridge at Capel Curig," G. Wells, 25*l.*; "What is she going to do?" C. J. Gripps, 20*l.*; "Newhaven Harbour, Sussex," R. H. Nibbs, 20*l.*; "Washing-day," B. Nordenberg, 20*l.*

From the Institute of Painters in Water-Colours.—"Lichfield Cathedral, from the Minster Pool," J. Chase, 45*l.*; "Sands of Lamentation, near Aber, North Wales," J. W. Whymper, 35*l.*

Brickmaking in the Isle of Wight.—Mr. Alfred Prangnell, of Elmsworth Brickyard, near Newtown, recently achieved the feat of making 2,012 best white bricks in twelve hours and a half. He has (according to the *Hampshire Independent*) done other remarkable things in the same line.

* See p. 604, *ante*.

THE DOME OF THE ROCK.

SIR,—Officers of the Royal Engineers seem to have a peculiar mode of conducting controversies on archæological subjects, which renders it extremely difficult to arrive at any satisfactory results. Capt. Warren, for instance, challenged me, in the columns of the *Athenæum*, to show, if I could, that his arrangement of the pillars of the Stoa Basilica was not correct. This I did easily in the following week's number (June 26, 1875). He replied in the next issue of that journal, neither admitting nor contesting my statements, but taking up entirely new ground; and when driven from this position took up a third; and when that was also found untenable, resorted to personalities, and so closed the correspondence. Fearing recourse to similar tactics in noticing Lieut. Conder's letter, which appeared in your issue of the 29th ultimo, I carefully avoided all speculative subjects, but selected one to which I thought a simple yes or no answer could be given, which was, whether the arches of the Dome of the Rock were pointed or not. It was also, it appeared to me, an architectural fact interesting to the public, and its discussion singularly suited to the columns of the *Builder*. As I knew he had been in the mosque and drawn a good deal when it was full of scaffolding, all I asked for was a drawing of one of these pointed arches, that the public might judge of their form.

The result is not satisfactory, as his answer in your last issue leaves it doubtful whether he adheres to his own statement or withdraws it. He refers to Lieut. Kitchener's photograph of the interior which is engraved as the frontispiece of his book,—"Tent Work in Palestine,"—and which proves beyond all dispute that the intermediate range of arches is circular; nor does he dispute the correctness of M. Comte's drawing of the exterior, where all the arches are circular, and the masonry and the ornaments of a style,—so far as I know,—never found in Saracenic buildings. The question is therefore narrowed, as I said before, to the sixteen arches supporting the drum of the Dome. Lieut. Kitchener's photograph is at too sharp an angle to settle this certainly, and, besides, a beam interferes just where the centre of the arch comes: hence the necessity of a drawing. As an excuse for not producing this, Lieut Conder states that he was frequently "cursed and hustled" in drawing in these buildings. He was enabled, nevertheless, to make correct drawings to scale of all the twelve Corinthian capitals which support these arches, and has published them in his "Tent-work in Palestine" (p. 223). As they are all different,—except three,—it must have been a work of considerable labour and skill to obtain them; and as he measured also the pillars and their bases, it is to be regretted that he did not also measure one of the arches,—they are all alike,—which rest on these capitals. It would seem to have been a much simpler and easier operation; but as it was not done then, we must wait until some one undertakes it now; and, after all, *I* do not think it of much importance (for reasons given in my last), nor, indeed, of any, except for the argument he proposes to base upon it. It is curious, however, as an architectural fact, and one would like to know how it is.

Instead, therefore, of a plain answer to a plain question, Lieutenant Conder invites me to discuss with him, in your columns, the text of Eusebius, Theodorus, Arculfus, and the "Pascal Chronicle," the interpretation of Arabic and Cufic inscriptions, and the history and architecture of the Aksah, the Dome of the Chain, and the Dome of the Rock, the site of Zion, &c. Many of these subjects, as he well knows, would take chapters to discuss properly, and others could not be rendered intelligible without more illustrations than could be afforded, and hardly one is suited for the columns of a weekly journal. I have no idea of embarking on such "a sea of troubles,"—especially when on the point of leaving London for the season. Indeed, I now sincerely regret my imprudence in asking a question about the pointed arches; but it seemed so simple, and only to require so simple an answer. Were I, however, to answer one of Lieutenant Conder's questions, I must answer all, or submit to being told that I do not answer any particular one, because I cannot, while the chances of any hit being scored in my favour seem very small. Besides, all of them, with many others far more important, and having more direct bearing on the main argument, have already been discussed to such an extent as I think necessary for elucidating the subject in hand in my various publications, especially the last on "The Temples of the Jews and other Buildings on the Haram Area." In his work, "Tent-work in Palestine," Lieut. Conder simply ignores the whole of these; but if he sees so clearly how erroneous my theories are, nothing can be easier than to refute them. I have always stated my views with the most perfect openness, and given my authorities for every statement I have made. There has been no reserve and no mystery, and any one, consequently, who knows better, can without any difficulty point out my errors, and convince the public that I am wrong, especially as ninety-nine men out of a hundred are offended by their novelty, and would be only too glad to see the pestilent heresy extirpated. But the case must be taken as a whole. Nibbling at the details of the argument in weekly letters to periodicals will never, I believe, suffice to enable the public to estimate the true bearings of the questions at issue.

I have not the smallest possible pretention to infallibility. As I said in the last paragraph of the preface to my work on the "Temples of the Jews,"—"All I mean to assert is that, as the evidence at present stands and is known to me, I can draw no other conclusions from it than I have done." I feel, and always have felt, that some new fact or some new excavation may any day alter the whole complexion of the case; but, meanwhile, I do not think Lieut. Conder can employ his leisure better than in exposing the errors of my logic, which he seems so confident he can do. If he does show me the error of my ways, I believe I shall be the first to confess it, but, whether I do or not, if it is done with the fulness of quotation and illustration that I have employed, the public will not be long in deciding between us; and, if the decision is against me, my works on the Holy Sepulchre must be relegated to that shelf of a library appropriated to curiosities of literature. I cannot say I have much fear of this result. JAS. FERGUSSON.

THE GILBERT SCOTT MEMORIAL.

SUBSCRIPTIONS are dropping in, but scarcely to the extent anticipated. The arrangement come to does not seem to be fully understood. It has been decided to place a Brass over the grave as the personal share of the memorial, and the design for this is being made. The remainder of the fund will go towards the founding of a teachership for art-workmen at the Architectural Museum, where there are plenty of students with lack of means to supply thoroughly the practical teaching they really require. At present there is an art-master from South Kensington in connexion with the Science and Art Department; but it is pretty well known how far short these masters are of a due knowledge of building construction, to say nothing of architecture proper. All who desire to give some further help in the matter of technical education for art workmen should help this fund. Mr. Maurice B. Adams, at the Museum, will afford any information that may be required.

A Mountain of Tin.—Tasmania is (according to an Australian paper) rapidly becoming a second Cornwall in the quality and extent of its tin supplies. Four years ago the value of tin and tin-ore exported from the colony was barely 7,000*l.*, while in 1877 the value of the metal sent out of the country was nearly 270,000*l.*, and the industry has received a fresh impetus in the discovery of a new lode-bearing district. Until very lately the principal portion of the tin produced in Tasmania was obtained by the ancient process of "streaming," or washing the sand and earth in water, and allowing the heavier metallic parts to subside; but by the discovery of the lodes at Mount Bischoff the colonial miner was able to compete on equal terms with his fellow-craftsman in Cornwall, and as the tin-mines of the old country have fallen off in productiveness, those at the antipodes have been able to make up for their failure. The mining district of Mount Bischoff has now found a rival in the discovery of a tin mountain at Mount Heemskirk, on the West Coast. The "wash-dirt" is some 20 ft. thick, and produces about 25 per cent. of tin; but the existence of solid seams of metal, traversing the mountains in veins several feet in depth and width, has thrown even these productive workings into the shade.

THE PROGRESS OF MUSIC IN ENGLAND.

SOME earnest steps have again been taken to bring about the union of the Royal Academy of Music and the National Training School of Music, and a desire that this should be effected has been expressed on both sides. Beyond this, however, it has been resolved by an influential meeting, held at the National Training School, that it is desirable to establish "A Royal and National College of Music," on a more permanent and extended basis than that of any existing institution. The course of instruction would consist of a complete course of training, extending over several years, and scholarships would be obtainable by open competition. Honorary fellowships would be bestowed. The Union of the Royal Academy of Music and the National Training School of Music is depended on for the constitution of the college, but other musical societies throughout the kingdom are to be looked to for co-operation. The proposition at present is not quite clear. We should be disposed to regard the scheme as one for the founding of a University of Music for the giving of degrees, the Academy, the Training School, and various other societies being affiliated, and taking the place of colleges. If the scheme be carried out, large accommodation for examinations would be needed, and the Albert Hall would come in for legitimate use. There seems reason to believe that the 1851 Commissioners are well disposed towards the scheme, inasmuch as Earl Spencer is one of the chief movers in it, and the fact that H.R.H. the Prince of Wales is named for the presidency shows that the project is not mere talk, but will in one shape or another be carried out.

ST. JOHN'S HOSPITAL, BATH.

ST. JOHN'S HOSPITAL, or Blue Alms, Bath, has been reopened, after considerable restoration and improvement. The Hospital of St. John the Baptist was founded (according to an address read by Mr. E. Turner Payne) in the year 1180, by Reginald Fitz-Jocelyne, second bishop of Bath and Wells, for the benefit of sick and aged poor. It was early attached to the Monastery of Bath, and remained part of its possessions until the Dissolution, when it passed to the Crown. Shortly after this event, it was annexed to the parish church of St. Michael within the walls, a building of which every trace has disappeared. St. Michael's-place alone recalls the name and indicates the site, which was closely contiguous to the ground now covered by Mr. Palmer's Cabinet Manufactory. Under the management of the rectors of St. Michael's *intra muros*, otherwise St. Michael by the Bath, within the city of Bath, the brethren were abridged of their rights, and the building became so dilapidated that early in the reign of Queen Elizabeth the establishment was nearly destroyed. Elizabeth, however, in 1573, granted a brief to be in force for seven years to raise money for the purpose of repairing the Abbey Church and rebuilding the "ruinated" Hospital of St. John. Warner states that the edifice of the hospital, as then rebuilt, was a low building of one story, extending 90 ft. in front by 26 ft. 6 in. in depth, and consisted of six rooms next the east front, and six next the west front, with a colonnade before the latter of 6 ft. broad, including the thickness of the columns, and three passages through the building from east to west, into each of which passages four of the rooms were made to open. Queen Elizabeth vested the patronage of the hospital in the mayor and chief citizens of Bath, subject nevertheless to the rules and orders on which it had been originally founded by Reginald Fitz-Jocelyne; but, says Warner, "the value of property in the city and neighbourhood of Bath has considerably increased, and the integrity of those entrusted with the patronage was not proof." In 1616 the Corporation made an order that the Mayor of Bath for the time being should be master of the hospital. This being carried into effect for nearly half a century, the income of the charity went into the chest of the Corporation, or was divided amongst its members, the poor brethren were discharged, the buildings neglected, the chapel was desecrated and converted into an alehouse or post-office. At last the peculators omitted to present, and the patronage lapsed to the Crown shortly after the Restoration. Charles II. thereupon presented his chaplain, John Rustat, to the mastership. The patronage, however, remained vested in the Mayor and Corporation of Bath,

who in 1683 presented one William Clement, and in 1711 one John Chapman, under whose mastership an information was filed by the then Attorney-General, which resulted in what is well known in the history of the hospital as Sir John Trevor's award, dated the 13th February, 1716. The findings in this suit, as set forth in the appendix to Warner's history, No. 76, disclosed a long series of misappropriation of the hospital property. Happily for the charity, the last improvident case was set aside, and by the award, leases for three lives were granted to the actual tenants of the lands and possessions of the hospital, at rents amounting together to 163*l.* 15s. 2d. The value of the hospital property was, however, found by the award to be 1,200*l.* per annum. By this award, Sir John Trevor established the scheme under which, till within the last fifteen years, the hospital property has been managed. In process of time, as the value of property has increased, the system has been found intolerable and wasteful of the funds of the charity, but it is interesting to reflect upon its influence upon the fortunes of the city of Bath. A large area on the west and south-west of the old city wall belongs to the Hospital. Had it not been for the greater security of tenure given by the award, this large space would probably have remained unbuilt upon. It would have been beneficial, no doubt (says Mr. Payne), in a sanitary point of view, to have a large open space near the centre of the city, but in what other direction would Bath have expanded? Where would be our Alsatia? Would the grave lines of Bathwick, or the square, crescent, and circus, designed and partly executed by Wood, have been possible? The history of the Hospital for the next 150 years seems to have been uneventful. Its possessions in and about Bath were much built over, and a great increase of annual value resulted. In 1820 the Commissioners for inquiring into charities reported that the value of the property was then upwards of 11,000*l.* per annum. Parts of the property are of now much less value, but others have probably improved. I think, therefore, that the present value may be safely estimated to exceed 10,000*l.* per annum,—a noble endowment for any charity. In the year 1851 the Hospital was decreed by the late Lord Chancellor Truro to be a municipal charity, and the patronage was accordingly vested by an order of the Court of Chancery, dated in 1853, in the Trustees of the Municipal Charities of Bath. In the legal proceedings, the late Mr. Thomas Fisher took a warm and intelligent interest, and his exertions and professional skill largely conduced to the preservation of the Hospital as a public institution, instead of its being sold for private purposes, as proposed by the Town Council of the day. Immediately upon their appointment, the Trustees proceeded to prepare a scheme for the management of the Charity and its property, and the administration of its revenue. Grave difficulties, however, presented themselves, especially those resulting from the system of leases for lives which for 150 years had prevailed, and upon the faith of the continuance of which a large expenditure had been incurred by the lessees. Eventually, after several years of correspondence with the Charity Commissioners, the Trustees consented to the institution of proceedings, and the Commissioners certified the case to the Attorney-General of the day, who, on August 11th, 1864, filed an information against the master, co-brethren, and sisters, for the establishment of a better scheme of management and administration. In May, 1865, on the death of a person upon whose life with those of others, numerous and valuable leases of the Hospital property had been granted, it became known that these leases would be renewed upon the old system. The Attorney-General thereupon filed a supplemental information to restrain the proposed renewals. The order was refused on a hearing, but the Attorney-General immediately appealed to a Superior Court, and obtained the order, since which no such grant has been possible. On the 18th of June, 1877, the new Board was first called together by the Attorney-General's solicitor, as directed by the new scheme, and the Trustees have since vigorously proceeded with the execution of the duties entrusted to them. They at once took the needful steps to survey the buildings of the Hospital itself, and obtain a report upon them. and in consequence directed the preparation of a specification, on which, with the assent of the Charity Commissioners, they entered into a contract with Mr. Ambrose Ambrose, who has carried out the work of restoration, under the superintendence of their surveyor, Mr. Henry Spackman. At an expenditure of about 1,100*l.* the building has been completely renovated.

FALL OF TREES IN WINDSOR PARK.

A REMARKABLE and rather alarming occurrence took place in the Long Walk at Windsor on Sunday afternoon, by which three young men very narrowly escaped with their lives. As is well known, in addition to the central drive in the Long Walk, there are avenues on the east and west sides, overshadowed with full-grown trees, which are favourite walks for pedestrians. About three o'clock in the afternoon of Sunday, a large number of persons who were taking exercise in the Walk were alarmed on suddenly hearing a loud crash proceeding from the avenue on the east side of the central walk, a short distance beyond the entrance to Frogmore Lodge, which was immediately followed by the falling of two ponderous branches of one of the trees, from an altitude of upwards of 40 ft. The branches were about 15 ft. in length, and measured 3 ft. in circumference, and were consequently of considerable weight. Three young men at the moment were sitting on a seat immediately under the tree, and fortunately had the presence of mind to rush to the main trunk, and thus escaped injury, the branches, however, falling within about a yard of the spot where they had sat. What may be added as a singular coincidence is that shortly before the above-named occurrence took place, a similar casualty happened in the same avenue a little further on, near to the lodge entrance of the Great Park, when a large branch fell from one of the trees at this spot. Within the last few weeks several of the large trees in the Walk, which had suffered much through being struck by lightning, have been cut down.

SCHOOL BOARDS AND THEIR ARCHITECTS.

AT a recent meeting of the Norwich School Board, Mr. White moved "That the preparation of the plans of the Crook's-place School, and schools hereafter to be erected, be thrown open to public competition. He contended that, during Mr. Brown's appointment, public competition had been superseded; and he was anxious that this state of things should be put an end to. By adopting this resolution they would be placing themselves in a fair position; and although he did not doubt for a moment that Mr. Brown supplied good plans, he would certainly supply them none the worse by going into competition with other architects.

The Mayor seconded the motion. He said he thought they had not acted fairly towards the ratepayers by pursuing the existing system of giving their own architect alone the preparation of plans for their schools. He understood that when Mr. Brown was first engaged it was simply to advise the Board; from that it came about that he made plans, and then they felt that they could not but employ him, so that he had actually got the whole thing in his hands, and those in Norwich who might have desired to compete for the preparation of plans had been completely shut out. He felt that Mr. Brown had given every satisfaction in preparing plans and superintending the building of schools; but for all that the system was unfair, and this motion was intended to bring about a better state of things.

Dr. Duckett said no doubt their object was to get the best architect they could; but he doubted whether competition was the surest way of obtaining that, especially when they had such a tried man as Mr. Brown, who, he believed, had obtained his present position by public competition. He, therefore, had demonstrated his ability to hold such a position. The London School Board's architect was permanently engaged for a special purpose, and the plans were not put out to competition. He moved as an amendment, "That it be referred to the general purposes committee to consider the propriety of putting out the plans of the Crook's-place School, and any schools hereafter to be erected, to public competition, and also the propriety of appointing a permanent architect."

Mr. White accepted the motion of Dr. Duckett.

Canon Copeman concurred with the course taken by Mr. White. His impressions with regard to the history of this matter did not agree with those of the Mayor. In the first instance, Mr. Brown undoubtedly obtained his position by public competition, honourably and fairly, and when they came to have to build schools, they were so indebted to Mr. Brown for unpaid services, for advice and assistance, that they felt they ought to employ him. They went on employing him until they felt that they were placing themselves in a false position, and it was suggested that they should give Mr. Brown the definite position of architectural adviser to the Board at a salary of 40*l.* a year. Accordingly Mr. Brown had gone on giving them advice and assistance, but such was the nature of his services, that it was perfectly ridiculous to suppose that 40*l.* a year was an adequate salary.

Mr. Cooper objected to such a low salary being given to a gentleman so that this was made a reason why the building of schools should be put into his hands and withdrawn from public competition. They could not put one wrong right by perpetrating another; and if Mr. Brown were not sufficiently remunerated, that was no reason why the public should be shut out from competition in the building of the schools. They wanted the best ability, and he thought they were not less likely to obtain that if there was competition among architects. As to the architect to the London School Board, he believed that official received 2,000*l.* a year as a salary, but he did not receive the usual fees, which would amount to an enormous sum, considering the number and extent of the schools erected in the metropolis. His was a permanent office, and he did not object to discussing the expediency of such an appointment at Norwich. He hoped the office would be wholly abolished, or else that the gentleman elected would be adequately remunerated for the duties attaching to the office.

The motion was then agreed to.

LONDON WATER-SUPPLY.

THE object of the audacious policy of some of the water companies, in increasing enormously their charges against consumers, may be to raise their property to a fictitious value in anticipation of its being taken over by the Metropolitan Board of Works; its justification is not certainly to be found in the improved quality of the supply. In his report for June, Professor Frankland states that,—"The Thames and the Lea have been much swollen by heavy rains, and the water drawn from these rivers by seven out of eight companies supplying London, was so much polluted by organic matter as to be unfit for dietetic purposes. Such intense pollution rarely occurs in summer, and the Southwark, Grand Junction, East London, and New River Companies seem to have been unprepared for it, as they have failed to filter the water effectively before delivery." "Moving organisms were found in the Southwark and Grand Junction Companies' waters," which were "turbid and brownish yellow." Colonel Frank Bolton reports of these two companies that they have not "storage capacity and impounding reservoirs" sufficient "to avoid taking in water when floods prevail." Colonel Bolton also reports that the companies have now an aggregate of 713 miles of mains constantly charged, and upon which hydrants could at once be fixed. The total number of hydrants at present erected is 4,626, of which 2,827 are for private purposes, 545 for street watering, 779 for public use, and 475 for Government establishments. The companies that are moving actively in giving constant supply, under the provisions of the Metropolis Water Act, 1871, in a portion of their districts, are the Kent, New River, Chelsea, Lambeth, and East London.

Bradford Theatre destroyed by Fire.—Fire broke out last week at midnight at the Prince's Theatre, Bradford, and in a short time the building was completely gutted and totally destroyed. The theatre was erected about two years since by a limited company, at a cost of 26,000*l.*, and has since been in the lesseeship of Mr. W. Morgan, whose time would expire on the 1st of August. Mr. C. Rice, of the Theatre Royal, Bradford, had engaged to take the premises, including the Star Music-hall, built underneath the theatre, which is not much damaged. The fire was discovered shortly after the theatre closed. Its origin is a mystery.

WHITLEY CONVALESCENT HOME.

ON Monday, July 15th, the annual meeting of the subscribers to the Prudhoe Memorial Convalescent Home, Whitley, Northumberland, was held at the institution, under the presidency of Earl Percy, M.P. Additional interest was lent to the proceedings by the inauguration of dormitories which had been added since the last meeting. Nineteen years have elapsed since the Convalescent Home was first established at Marsden, and eleven years ago, the foundation stone of the new Home at Whitley was laid by Earl Percy, the building being erected as a memorial to Algernon, Duke of Northumberland. Nine years ago the building was formally opened by the Duchess Eleanor of Northumberland for the reception of patients; and since that time the demand for admission has been beyond the accommodation the building would afford. The Home was originally planned to accommodate about seventy patients; but the architect (Mr. Thomas Oliver, Newcastle) made provision in the administrative department for the effective working of the institution should more accommodation at any time be added. Additions have been made to the building, by which accommodation is provided for nearly fifty patients, and now about 120 patients can be admitted. The new buildings consist principally in extensions to the men's side of the Home, and comprise two spacious additional dormitories, placed at right angles to the existing north wing, and two day and reading rooms on the west front, together with smoking-rooms, store-room, &c. The works have been carried out in stone throughout, and harmonise with the existing buildings. The whole cost has been about 3,000*l*. Further works, involving an outlay of about 3,500*l*., are contemplated as soon as funds will permit.

FISHING FOR NOTICES.

A FRENCH publisher, seeking to push what seems likely to be a very questionable French novel, sends us a cut-and-dried notice of it, with an intimation that, on receipt of the *Builder* containing the notice, a copy of the book will be sent in exchange. Clever, certainly, though not clever enough this time. But we can match it at home. Here is a note just now received:—"The secretary of" So-and-So's "Water Meter Company presents his compliments to the Editor, and begs the favour of the insertion of the accompanying paragraph. *Doubtless* an advertisement will follow." Careful secretary! not to commit his directors to payment for the unfounded praise. America sends us something almost as 'cute by the same post. The writer says he is about to establish a newspaper to defend the interests of British subjects in the United States and elsewhere; and that, as he intends to forward us a copy of the paper, he requests us "immediately on the receipt of this letter," not only to send him our last issue, but permanently place him on our list of exchanges. Old-fashioned people would have sent a copy of the new paper first.

"SHOULD HORSES BE SHOD?"

THIS is the heading of a paragraph in last week's *Builder*. I am very glad at last to see that public attention is drawn to this very important question, and one that requires immediate attention, for the benefit of poor horses, which in numerous places in the City are unable to keep their feet when drawing heavy loads. The stamping and straining to keep their feet must be very injurious, and amount simply to cruelty. Those who profess to stand up as preventors of cruelty to animals should come forward, or some capitalist, and give the horses the benefit of their pity in a substantial manner. Horses put to heavy work could never do without shoes, as suggested; and, on the other hand, nailing shoes on their feet, all will admit, is very injurious. If one or more of your numerous readers would find a little capital to fit up one or two teams that are constantly carrying heavy loads in the City, they would set a practical and humane example, which others would soon follow.

I would propose to have shoes made various sizes to fit on to the horses' feet, about 1½ in. up the hoof, to clip over, and to continue the width of an ordinary shoe underneath the foot, made with holes in such a manner that steel studs, partly sharpened, about ¼ in. to ⅜ in. long, could be fixed in them, and replaced with others when worn out. This would give the horses a firm and sure footing wherever they went. The hoofs would want paring sometimes to fit nicely, the same as a man's corns when they are troublesome. A simple arrangement to fix the shoes when on would be essential to give them a firm hold. Two horses would do the work of three with greater ease, and far less injury to the horses. Owners would save a great deal in horseflesh by adopting this suggestion. No doubt other propositions will be forthcoming, and if better than this I should be pleased to see them brought into use. They could be taken off at night, and put on again when the horse is wanted.

If once this great and humane boon to horses were forthcoming, we should soon see factories established, and shops for horses' shoes, where they could be fitted from a stock in a few minutes, and sent about their work again. An immense amount of time would be saved to those having a large number of horses, and also in winter, when they required sharpening; they would also be a protection to their feet. Why not have horse-shoe shops as well as men's shoe-shops?

J. B.

BRITISH AND FOREIGN COMPETITION.

IN the Engineering Trades' Report, just now issued by Messrs. Matheson & Grant, we find the following observations:—

"Apart altogether from the present depression of trade, the great Labour question presses on manufacturers as the difficulty for the future. Although trade-unions have been quiescent lately, workmen have shown little inclination to assist the masters in meeting adverse circumstances. In the engineering trades, the struggle is not so much about wages—for the various crafts are such as will generally allow liberal rates,—but about hours of labour, vexatious restrictions, and the apparently capricious interference which hinder the profitable working of a factory. English makers find it hard to believe that their foreign rivals are similarly troubled; and it is difficulties of this kind, rather than any within their own control, which make them fear foreign competition. An agitation for reciprocity, or some other modification of Free Trade, still continues, and is chiefly upheld by those who would set the supposed interests of a trade above those of the community. There is no doubt that individual trades will be closely pressed by foreign competition, and if with a fair field the English makers allow themselves to be beaten, it is for the general good of the country at large that it should be so, and that prices unnecessarily high should not be paid. But though American tools, German hardware, or Belgian joist-iron of doubtful quality may be sold at low prices in England and in the Colonies, such isolated instances afford no real criterion for estimating the staple manufactures of the country; and though England will not again enjoy a monopoly of the engineering trades, the resources and ability available are far too great to justify any anxiety that the extension of trade will cease. Nowhere is capital so abundant and powerful, coal and iron so plentiful or so well placed, and facilities for shipment so great, as in England; and if the cost of labour be measured by value of products, and not by the mere rates of wages, the English workman still distances all competitors."

BUILDING IMPROVEMENTS AND EXTENSIONS IN WINDSOR.

VERY considerable operations in building are at present going forward in Windsor and the neighbouring parish of Clewer, which has now for some time past been included within the Parliamentary area of the royal borough.

Restorations have likewise for some time been in progress at different points around the Castle, and at the present time works are being carried out at St. George's Chapel. The south-west elevation is to a great extent being re-faced, including the pinnacles and turrets, which are now in course of restoration, and it is understood that the intention is to restore and reface, in a similar manner, the buttresses and the flying-buttresses above, both of which appear to be in a rather dilapidated condition. Amongst the new buildings in the town of Windsor which have just been completed are new offices for the Windsor Gas Company, which are situated on the south-east side of the town, a short distance from the lower part of High-street, and near to the open space known as Bachelors' Acre, where the bachelors of Windsor erected the Jubilee Obelisk to King George III. The building is in white Suffolk brick, with Portland-stone dressings, and polished granite columns for ornamentation. In the immediate neighbourhood, and also towards the west, in which direction the town is extending into the locality of Clewer, a large number of villa residences have recently been erected, whilst several others are at present in progress. Similar improvements in cottage-building are likewise going forward in several parts of the town. In this class of buildings Mr. Richardson Gardner, the member for the borough, is taking a deep interest. He has just purchased a whole street of old cottage-buildings a little to the west of the Great Western Railway Station. These buildings, which stood at a very low level, and were damp and unhealthy, have been entirely cleared away, and the site having been raised about 4 ft., and filled in with concrete to the ground floor, a set of new cottage buildings have been erected, which have a neat and comfortable appearance. They are formed of stock brick, with red brick dressings and ornamental bands, the elevation in the centre and at each end of the block being surmounted by gables. The different tenements are approached at each end by flights of steps leading on to a terrace in front of the buildings. They are called Victoria Cottages, and an inscription in stone in the centre of the block indicates their re-erection.

Mr. Gardner has likewise just erected a large block of similar cottages on a portion of the Clewer Estate, upwards of fifty acres in extent, and which is now being laid out for building purposes. The tenements which have been so built are called Gardner Cottages, and are 100 in number. The land around which the cottages have been erected occupies an area of upwards of six acres, the buildings forming the four sides of a square, with elevations east, west, north, and south, to streets around the site. The buildings forming the square enclose a large recreation space, together with gardens attached to each tenement, for the use and recreation of the tenants. On other portions of the Clewer Estate, residences of a high class, as well as cottage-buildings for the industrial classes, are rapidly springing up, and in a short time the neighbourhood of Clewer is likely to add very materially to the general population of Windsor.

PARLIAMENTARY.

Charges of Metropolitan Water Companies.—In the House of Commons, on the 18th inst., Colonel North asked the Chancellor of the Exchequer if his attention had been called to the enormously increased charges of the metropolitan water companies under certain alleged legal rights in their Acts of Parliament consequent on the re-assessment of property, and whether the Government contemplated any commission of inquiry on the subject with the view of protecting the public against such charges and making the supply of water, and not rateable value, the basis of payment. The Chancellor of the Exchequer, in reply, said the attention of the Government had been directed to the matter. He did not know that it would be the best course to appoint any commission of inquiry, but undoubtedly the whole matter was one that demanded inquiry and consideration.

Arklow Harbour.—In answer to Mr. Parnell, Sir H. Selwin-Ibbetson said that, owing to the refusal two years ago, by the persons interested, of the Government offer to provide half of the cost of improving Arklow Harbour, and to advance the other half by way of loan, the improvement scheme had fallen through, but he understood that the Wicklow Copper Mining Company had now applied for a loan of 12,000*l*. or 13,000*l*. for the purpose of improving the harbour.

The Incorporated Church Building Society held its last meeting for the present session on the 15th inst. During the session just concluded the sum voted by the Society in aid of the various works brought before them has been 12,471*l*., whilst the amount of receipts in the same time falls considerably short of that sum, and it is stated that unless greater support is given to the Society there must be a reduction in the scale of grants.

OBITUARY.

Mr. H. F. Lockwood.—Mr. Henry Francis Lockwood, head of the firm of Lockwood & Mawson, architects, Bradford and London, died at his residence, Heron Court, Richmond, Surrey, on Sunday last. "Mr. Lockwood," says the *Bradford Observer*, "came to our town at the time when it was at the point of its most notable development, and gave to its architectural history a distinctly marked character. He was brought up in the Classical rather than in the Mediæval school." His health has been failing for some time past. Mr. Lockwood was born at Doncaster, and was, it was stated, in his sixty-seventh year. He was articled to the late Mr. Peter Robinson, of London, for whom, on the completion of his articles, he superintended the works at the rebuilding of York Castle. He commenced practice in Hull at the age of twenty-three, and from that time to the present he had been actively engaged in many large and important undertakings. In 1849 he removed from Hull to Bradford. In conjunction with his partners, Messrs. William and Richard Mawson, he has erected many of the public buildings of Bradford, including the Townhall, the markets, St. George's Hall, the Exchange, and Airedale College, and he was employed by Government in the erection of the Rifle Factory at Enfield Lock. He was appointed one of the competing architects for the New Law Courts, and in the year 1874 he removed to London, where he has since resided, and where he has been engaged upon many extensive works, such as the City Temple, the Inns of Court Hotel, the premises for the late Mr. Charles Meeking on the Holborn Viaduct; also for the Fore-street Warehouse Company, the Merchant Taylors' Company, and the Civil Service Association. During the course of the improvements in the streets and buildings in Bradford, Mr. Lockwood was retained throughout by the Bradford Corporation as their arbitrator. He was architect to the late Sir Titus Salt, not only in the works and town of Saltaire, but in numerous public and private works with which Sir Titus was associated.

RIGHTS OF THE OWNERS OF LAND ADJOINING RAILWAYS.

NORTON *v.* THE LONDON AND NORTH-WESTERN RAILWAY COMPANY.

THIS case, tried in the Chancery Division, before Vice-Chancellor Sir R. Malins, is so important that we have delayed referring to it until we could find space to give the whole of the judgment.

His Lordship said this case involved a question of considerable importance to the public, for if the contention raised on behalf of the defendants could be maintained, it would place the country generally in the most unfortunate position with regard to land adjoining railways. The plaintiff, who had died since the commencement of these proceedings, had taken a lease for 99 years of some land next against the line of the London and North-Western Railway, at Saltley, near Birmingham. The land on both sides of the railway at this place belonged to Sir Charles Adderley. The plaintiff's house was built in the year 1861, and it was opened as an inn, and was called the Station Hotel. The front of the house opened upon the road, but the back part looked over the line of railway, and the seven windows at the back derived their light and air from over the railway. Mr. Norton had full enjoyment of his house, unquestioned by the railway company, till the year 1874, when the company erected a signal-box, which was used for the purpose of working the line of rails. The railway was in a cutting, so that the signal-box was somewhat lower than the windows of plaintiff's house, and the smoke from the chimney belonging to the signal-box was very frequently blown into the plaintiff's windows, and he alleged that the nuisance was so serious that it prevented his customers from frequenting his inn, and his trade was thereby injured. The plaintiff made a complaint to the authorities of the railway company respecting this nuisance, and subsequently the signal-box was removed from where it at first stood and was placed in another position. This removal, however, did not appear to have been effected for the purpose of preventing the nuisance of the smoke, but to suit the convenience of the defendants, and a gas-stove had since then been used instead of a coal fire. It seemed that this complaint which had been made by the plaintiff was very annoying to the officials of the company, and they claimed an indemnity from Mr. Norton, in the shape of a rent, for the privilege of uninterrupted light and air across their railway. This claim was refused, and thereupon the company thought fit to erect a large hoarding directly in front of the plaintiff's house, and within 1 ft. of his windows, whereby the light and air were almost entirely excluded. Having done this, the company persisted in retaining the hoarding for a period of six months, until (in December, 1875) it was accidentally blown down by the wind. The company still claimed the right to shut out the light from the plaintiff's windows, and this very expensive litigation had been caused owing to the claims set up by the company; and, if it succeeded, the effect would be that any person erecting a house close to a railway might be entirely prevented from having any windows in the house which should look over the line. A question very similar to this was raised in the case of The United Land Company *v.* The Great Eastern Railway Company (Law Rep., 17, Eq., 158), which was confirmed by the Court of Appeal, and it was there held that the rights of a landowner on the line of a railway ought to be in no way prejudiced except so far as was required for the actual construction of the railway. The landowner was to have as much enjoyment and as free use of his land after the railway was constructed as he had before, so far as the execution of those rights did not interfere with the rights of the railway company and the rights of the public in running over the lands upon the railway. His Lordship was, therefore, of opinion that the rights of the plaintiff, as the owner of adjoining land, were precisely the same as he would have had if no railway had been made, and one of those rights was that of erecting a house, and he was fully entitled to use all the rights appertaining to the erection of a house so long as he did not interfere with the rights of the public in running over the land upon the railway. No man could possibly say that the plaintiff's windows in any manner interfered with the rights of the railway company in using their line for the purposes for which it was intended. The company were not to take away from the owner of the adjoining land anything that was not absolutely wanted for the purpose of the railway. Then the company, feeling as they must have done that they had no right whatever to prevent the plaintiff from using his windows, and that they had only power to prevent the erection of such works as might be an injury to their line, set up this defence,—that possibly at some future time they might require this land for the purpose of erecting a station. This contention he believed to have been a mere afterthought. There was no evidence whatever to show that the company were likely to require a station at this point, and if they did erect one they had no land upon which they could make approaches to such a station. They would in that case have to purchase the requisite land. The suggestion was nothing more than a pretence, and had no foundation whatever. The plaintiff had a right to the enjoyment of light and air to his house, and to have as many windows as he pleased, and these proceedings to prevent him were wholly unjustifiable. A question had been raised as to damages occasioned to the plaintiff by the smoke from the signal-box and the damage caused by the erection of the hoarding. His lordship was of opinion that the plaintiff was entitled to compensation in damages in respect of both the smoke and the hoarding, and an inquiry must be directed as to the amount of damage sustained by him. Then there was another question raised —whether the company were entitled to the land to the extent of 4 ft. 6 in., which adjoined the quick fence along their line at this particular point. Taking into consideration all the evidence which had been produced, he was of opinion that there never had been any ditch as alleged by the company outside their quick fence; and that the fence was always intended by the company to be the boundary of their property. The result was that a perpetual injunction must be ordered, restraining the defendants from re-erecting any hoarding so as to interfere with the access of light and air to the plaintiff's premises, and there must be an inquiry as to damages for the injury caused to the plaintiff by the issuing of smoke and by the erection of the hoarding, and the company must pay the costs of the action."

ACTION AGAINST CONTRACTORS FOR INJURY TO A WORKMAN.

CLUTTERBUCK *v.* COMMISSIONERS OF SEWERS; SAME *v.* TRUSTEES OF THE CITY TEMPLE; SAME *v.* MYERS AND OTHERS.

IN this case, heard in the Bloomsbury County Court, on the 22nd inst., the plaintiff, a gasfitter, sought to recover the sum of 300*l.* damages for injuries received by falling through a broken paving-stone on the premises of the City Temple.

Mr. Woolfe, who appeared for the plaintiff, stated that the action had been originally brought against the trustees of the City Temple alone, but that under the new Judicature Act, the three defendants were joined in the present action.

The plaintiff deposed that on the 11th of September, 1875, when in front of the City Temple, proceeding with his work, the flag-stone on which he was standing gave way, and he was severely injured in the chest and spine. He was at the time of the accident earning 2*l.* 10s. a week, but since then he had only been able to earn half that sum per week. He had had to pay a doctor's bill, amounting to 18*l.*, and claimed compensation for the suffering he had endured.

Mr. F. G. Norton, inspector of pavements for the Commissioners of Sewers, called, said he saw the stone in question about a week after it was broken. It had not a proper foundation, nor was it supported in the centre. He considered that Messrs. Myers, the contractors, were wholly to blame as to the cause of the accident.

Colonel W. Haywood said he was engineer to the Commissioners of Sewers. He constructed the viaduct, but could not say who laid the stone in question: it was not done by the direction of the Commissioners of Sewers.

At this stage of the case the Judge remarked that there was no evidence to go to the jury on the fact that the stone in question was laid by the Commissioners of Sewers, or by their authority, and as there was no negligence shown, plaintiff should be nonsuited so far as the Commissioners of Sewers were concerned.

The case against the trustees of the City Temple was then gone into, when Mr. Lockwood, jun., was called, who said his father, who died only on the previous day, was the architect of the City Temple. Messrs. Myers & Son, the contractors, were bound by their contract, in one clause of it, "to relay and make good" any paving-stones injured in the operation of their work.

A labourer was called and said he was employed by the contractors, and had cracked the stone in question by letting an iron girder fall upon it.

The Judge hereupon said he would take the opinion of the jury as to who was liable, and who had been guilty of negligence.

The jury, after a brief deliberation, said they considered there was no case against the trustees of the City Temple, and held that there had been negligence on the part of the contractors, and gave damages in favour of the plaintiff for 80*l.*

His Honour said that finding would be judgment in favour of the trustees of the City Temple, and against the contractors, who would have to pay all the costs.

PATHS.

SIR,—I am very much troubled with weeds growing through my new roads and footpaths, and shall be obliged if, through your valuable paper, I can hear of something that will destroy them without breaking the surface.—H. T.

CASES UNDER THE METROPOLITAN BUILDING ACT.

WOODEN BUILDINGS.

ON the 2nd inst. Mr. C. King, of Ashchurch-terrace, Shepherd's Bush, appeared before Mr. Paget, at the Hammersmith Police-court, in answer to a summons which had been taken out by Mr. T. E. Knightley, district surveyor for Hammersmith, charging him with having done work without giving notice, as required by the Act.

The District Surveyor stated that defendant had erected in his garden what he should call a greenhouse, sashes and other woodwork being placed on brickwork 4½ in. thick. He gave an approximate size, which he said was all he could do, having been refused admittance to the premises. All he asked was compliance with the Act, which required the brickwork beneath sashes to be increased to 9 in. in thickness, with two courses of footings. He did not press for a penalty, although in order to be regular he had taken the initial proceeding under a penal section of the Act.

Defendant called the building a "summer-house," and asked the magistrate whether such an erection came within the meaning of the Act. He had removed an unsightly dustbin, and utilised the old bricks in the lower portion.

Mr. Paget, replying to defendant, said he had no doubt this summer-house was a "building," if constructed in the manner described by the district surveyor and himself. He asked what alteration would bring it within the requirement of the Act, and upon being informed upon this point adjourned the summons for a fortnight, expressing the hope that defendant would no longer go on cutting off his nose to spite his face, but would meet Mr. Knightley properly in the matter, and do the work.

Mr. Pott was recently summoned by Mr. T. E. Knightley, district surveyor for Hammersmith, before Mr. Paget, at the Hammersmith Police-court, for having erected a wooden building at No. 30, Stowe-road, Shepherd's Bush without giving notice as required by the Building Act.

The District Surveyor explained that the building was approximately 11 ft. long, 5 ft. deep, and 7 ft. high; it was enclosed with wooden boarding instead of brick walls, and was therefore an illegal building. He had used every endeavour to persuade Mr. Pott to make the necessary alteration, but without effect. The defence was that this was not a building within the meaning of the Act; Mr. Knightley, however, read over some decided cases on the subject, and the magistrate coincided in the view taken. Addressing defendant, he said:—"My opinion, according to your own description, is that this is a 'building.' It is useless to kick against the pricks by flying in the face of public officers. I would recommend you to do as Mr. Knightley has suggested, he having met you very properly in the matter." The defendant protested he would pull it down altogether, whereupon Mr. Paget said he would adjourn the summons for a fortnight, to enable him to do so, as the surveyor did not press for a penalty.

FRITH HILL, GODALMING, AND FARNCOMBE WATERWORKS.

THE pretty district of Godalming, which, since the removal thither of the Charterhouse, has been steadily increasing in importance, will soon have the benefit of a good supply of water, a company with local gentlemen of influence as directors having been formed and a Board of Trade order obtained. Mr. Jabez Church, C.E., who has been appointed by the company to design and carry out the works, has proved by trial borings in the green sand that an unlimited quantity of water is to be relied upon, and of a quality of which Dr. Frankland and other eminent chemists report most favourably. The works were commenced on Monday under the inspection of the engineer; and the necessary buildings and water tower to supply a portion of the district will be designed to harmonise with the beautiful locality by Mr. C. F. Hayward, F.S.A., architect.

THE PARIS INTERNATIONAL CONGRESS OF ARCHITECTS.

THE work of this Congress, of which we have already spoken, will commence on Monday next, the 29th inst., and will be carried on until Saturday, the 3rd of August. It will include a visit to the city of Reims (on the 1st of August), and end with a confraternal dinner. Some interesting questions are proposed for discussion.

THE GROSVENOR GALLERY.

As many applicants for Sunday admission tickets to the Grosvenor Gallery are under the impression that it will be opened next Sunday, may I ask you to allow me to state that the Gallery will not be opened on July 28; but that free tickets for Sunday, August 4, may be obtained from the office of the Sunday Society. All applications for tickets must be by letter, enclosing stamped and addressed envelope.

Visitors should be reminded that catalogues cannot be obtained on the day.

M. H. J.

YARMOUTH MUNICIPAL BUILDINGS COMPETITION.

AT a meeting of the Mayor, Aldermen, and Burgesses of the borough of Great Yarmouth, on Monday, the 22nd inst., the following report of the New Public Offices Committee was confirmed:—

"The committee having carefully considered the designs sent in by the forty-one competitors, with respect to the probable cost, the light given to the courts, rooms, and corridors, the width of the corridors and passages, the sanitary arrangements, and the architectural merits of each of the several designs, and with the assistance of Mr. Edward Boardman, architect, of Norwich, whom the committee had called in, and who stated that he was entirely ignorant of the names of the authors of any of the designs, resolved unanimously to recommend the Council to award the first premium to the design bearing the motto 'Beacon Blue,' as fulfilling the requirements of the Council more than any other design sent in, and for similar reasons to award the second and third prizes to the designs bearing respectively the mottoes 'Saxon' and 'Bona Fides.'

The Committee feel assured that the design of 'Beacon Blue,' when carried out, will not only answer the purpose for which it is intended, but also add to the architectural embellishment of the town. The specification sent in with the design stated that the author was confident that the building, as designed, could be carried out for the sum named in the Instructions to architects."

The Mayor subsequently opened the sealed letters which accompanied the three designs sent in, to which prizes had been awarded, and it appeared that the design sent in with the motto "Beacon Blue" was submitted by Mr. John B. Pearce, architect, of Norwich; the design sent in under the motto "Saxon" was submitted by Messrs. George Nattress & George Sedger, architects, of 31, Great James-street, Bedford-row, London; and the design sent in under the motto "Bona Fides" was submitted by Mr. Brightwen Binyon, architect, of Ipswich.

BROMPTON ORATORY COMPETITION.

SIR,—With all deference due to Mr. Willey, may I observe that my letter was not addressed to him, and he seems to have misunderstood the purport of it? I particularly wrote to the Fathers, in the vain hope that they would have the civility to reply, as it is for them to say whether they will allow Mr. Waterhouse's report to be made public. If they still remain silent, and refuse to grant this favour, I shall consider, in conjunction with other architects, their silence as a proof that their decision entirely disagrees with Mr. Waterhouse's opinions.

I am exceedingly surprised at the course they have taken in the matter, as it is so derogatory to men in their position to call in the assistance of an "eminent architect," and to advertise the fact as an inducement to architects to compete, and lead them to suppose they would be dealt with justly; which has not been the case. There would have been a small excuse for them had they been unadvised as to the professional usages in such a case; but I see no excuse whatever for them when they had Mr. Waterhouse to tell them of their unfair behaviour towards a number of honourable men, such as those who have been innocent enough to send in designs under such circumstances. AN OUTSIDER.

PORTLAND CEMENT TESTING-ROOM.

SIR,—Having seen in your valuable journal a notice of a testing-room and laboratory for Portland cement, established for the satisfactory guarantee of a good quality of the same, I feel sure that it will supply a want that has long been felt.

A difficulty, however, appears to remain where the Portland cement is delivered on works having no clerk of works; or where there is a large supply of Portland cement, then whether the whole quantity is equal to the sample tested can scarcely be known.

Of course it is to the manufacturer's interest to see that every bushel is of the quality specified, and it remains to be seen whether any check can be put on the builder after the cement has left the manufacturer's hands, and he has done all in his power to ensure a good result.

W.

The Land Titles and Transfers Act.—The Select Committee of the House of Commons on the Land Titles and Transfer question have terminated their sittings for the present session, and have reported the evidence taken before them to the House, with the recommendation that the committee be reappointed next session.

A NUISANCE AT BRIXTON.

SIR,—The neighbourhood of Loughborough Park,—one of the pleasantest parts of Brixton,—has for the last few evenings been afflicted with a serious nuisance, in the shape of a disgusting effluvium, given off, it is believed, from a newly-established soap-boiler's, tallow-melter's, blood or bone boiler's, or some kindred business, carried on, so far as can yet be made out, in some of the arches of the London, Chatham, and Dover Railway, about midway between Loughborough Junction and Brixton Stations. The nuisance can only be compared to that which has existed for so many years in the neighbourhood of Friar-street, Blackfriars-road. Such a nuisance, in this hot weather, is likely to be fraught with serious effects on the health of the inhabitants, to say nothing of the deterioration in the value of property which must ensue. The Lambeth Vestry and the Metropolitan Board of Works have been communicated with, as have also the railway company, the latter, I believe, disclaiming any knowledge of any such noxious business being carried on in any of their arches in the neighbourhood. Pray, Sir, allow me, through the medium of your journal, to urge the inhabitants and property-owners of the neighbourhood to take prompt and determined measures to put down so intolerable a nuisance.

BRIXTONIENSIS.

STAINED GLASS.

Wistanstow.—A new stained-glass window has been placed in the parish church of Wistanstow, in memory of the sister of the rector, the Rev. J. Swainson. The window has three lights. In the first opening is a figure of Miriam with a cymbal. The centre light is devoted to a representation of "Hannah" in a devotional attitude; whilst in the third opening is "Rachel," bearing a shepherd's crook. The whole rests upon an ornamental base, and is surmounted with a rich canopy, the tracery consisting of illuminated designs. The window is the work of Mr. Davies, of Shrewsbury.

Great Berkhampstead.—A stained glass window has been placed in the parish church of St. Peter, in memory of the late Mr. Longman. It is on the north-eastern side, and faces the Grammar School. The window has been executed by Messrs. Heaton, Butler, & Bayne.

Folkestone.—On St. Peter's Day three new stained-glass windows were unveiled in the south wall of the nave of St. Peter's Church. They have been executed by Messrs Clayton & Bell, at the cost of a gentleman who is a frequent visitor to Folkestone. The subjects of the designs are events in the life of the Apostle Peter. The one nearest the pulpit represents the delivery of Peter from prison; the centre window represents the healing of the sick at the Beautiful Gate of the Temple; and the third, the miraculous draught of fishes.

CHURCH-BUILDING NEWS.

Chelmsford.—The entirely rebuilt church of St. Lawrence, Chelmsford, has been opened. The former structure had fallen into great dilapidation. The ancient chancel, having entirely disappeared, was replaced some few years since by an ugly brick excrescence. The new church is erected upon the old lines, in the Perpendicular style, similar to the old building. The plan consists of nave, 45 ft. by 21 ft., chancel, 21 ft. by 17 ft., vestry, and north porch. The material used externally in the construction of the building is Kentish rag stone, in random courses, and all windows, doorways, weatherings of buttresses, and dressings generally, are in Bath stone. As much of the ancient stone and other material as it was possible to work in again has been re-used. The roofs are covered with old tiles crested with an ornamental tile ridge. The nave roof is surmounted by an oak octagonal turret, the spire of which, rising to a height of 60 ft., is covered with shingle. The church is warmed by one of Rimington's hot-air stoves. Mr. Robert Wheeler, of Tunbridge Wells, is the architect, and Mr. W. Stammers, of Southminster, the builder.

Ashe.—A new church erected at Ashe, near Basingstoke, has been consecrated. The architect is Mr. G. G. Scott, and the builder was Mr. Samuel Elliott, of Newbury.

Ashton-under-Lyne. — The Bishop of Manchester has consecrated the new Church of the Holy Trinity, Ashton-under-Lyne. The church was founded by the late Mr. Heginbottom, of Ashton. The style of the building is Early Pointed. Internally, the walls are of red brick below, and red and white in patterns above. Externally they are of red brick, with bands and patterns in blue brick. Sitting accommodation is provided for 760 worshippers, all the seats being "free and unappropriated for ever." A sum of about 12,000*l.* has been spent upon the building and its surroundings, but there still remains to be erected a parsonage-house. The works have been carried out by Messr. W. Storrs & Co., contractors, Stalybridge, from designs by Messrs. M. & H. Taylor, Manchester. The chancel is paved with tiles supplied by Mr. Godwin, of Lugwardine. The contractor for the heating arrangements, which will be by hot-water pipes, was Mr. John Wilson, of Ashton. All the painted windows are by Messrs. Heaton, Butler, & Bayne. There is but little carving; what there is has been done by Messrs. T. Earp & Sons. The bells are by Messrs. Mears & Co.

Wiltshire.—At the quarterly meeting of the Salisbury Diocesan Church-Building Society, on the 2nd inst., a grant of 125*l.* was voted towards the enlargement and restoration of the parish church of Child Okeford, in the archdeaconry of Dorset, and a similar amount was also provisionally granted to further the rebuilding and restoration of the parish church of Shapwick, in the same archdeaconry. Votes were also made to Codford St. Mary, in the archdeaconry of Sarum, and to Avebury, in the archdeaconry of Wilts, towards the restoration of the parish churches in those parishes.

Brereton.—St. Michael's Church, Brereton, near Rugeley, has been reopened, after enlargement and restoration. The church, which was originally a cruciform building, opened in 1837, has been enlarged by the addition of north and south aisles, designed by the late Sir Gilbert Scott, who closely adhered to the style of the existing structure,—late Early English verging on Early Decorated; and it will now accommodate about 400 worshippers. Externally the only striking feature of the new work are the corbels, from which spring the moulded labels of the east windows, those on the south aisle representing her Majesty the Queen and the late Bishop Selwyn, and those on the north aisle the apostles St. Peter and St. Paul. The new work is of local stone, the royalty and cartage of which was given by the late Earl of Shrewsbury. The total cost of the works has been about 3,000*l.*

Minster-in-Sheppey.—Mr. Ewan Christian, the architect to the Ecclesiastical Commissioners, has visited the Abbey Church, Minster-in-Sheppey, which is about to be restored. The cost of the restoration will probably be about 3,000*l.*

Bardney. — The church of St. Lawrence, Bardney, has been reopened, after restoration. The walls and arches have been cleared of the plaster which covered them, the false roof taken away, and the old oak roof displayed. The west end of the north aisle is formed into a baptistery. The windows have been restored, and filled with cathedral glass, and floors laid throughout with encaustic tiles. All the old pews have been swept away, and replaced by chairs. The whole of the works have been carried out by Messrs. Walter & Hensman, of Horncastle, under the direction of Mr. James Fowler, architect, Louth. The whole of the funds, 2,500*l.*, required for a perfect restoration, have not yet been raised; the tower and porches are left for future restoration.

Sutcombe.—The Parish Church, dedicated to St. Andrew, and built in the local Perpendicular style, has been in part restored, and further renovations are in contemplation. The parish is a remote one, some six miles from Holsworthy. The restoration has been carried out at the expense of the rector, the Rev. A. E. Clementi Smith. The architects engaged are Messrs. Bodley & Garner, of London. The church consists of a western tower, nave, north aisle, chancel, and south chancel, or Thuborough aisle. The building is interesting as possessing a wealth of old carved woodwork, the ancient bench-ends, and the lower part of what was once a rood-screen still remaining, sadly mutilated. The present works embrace the restoration of the chancel-roof and renovation of the chancel generally; new stalls have been made, with richly-carved ends, the late type of ornament general in the church being strictly adhered to in the new work. Many of the old carved benches in the nave have also been restored. These works and the new carved work have been carried out by Mr. Harry Hems, of Exeter. The roof of the chancel has been decorated in colour by Mr. Carter, of London. The general works are by Mr. Allin, of Sutcombe.

Tarporley.—The tower of Tarporley Church, Cheshire, has been recently inspected by Mr. Crowther, the architect for the work. In his report he gives a satisfactory account of the manner in which the builder, Mr. James Fleet, has executed his task. The cost of rebuilding it amounted to 2,348*l.* 11s. 8d.

DISSENTING CHURCH-BUILDING NEWS.

Kirkcaldy.—The memorial stone of the new Free Church, Kirkcaldy, was laid on the 15th inst. by Provost Swan. The church is to be built in the Gothic style with a tower and spire attaining a height of 250 ft. Sittings are to be provided for 1,150 persons. Adjoining are to be Sabbath school and young men's halls, the former to hold 300 and the latter 150. The architects are Messrs. Mathews, Aberdeen. The contractors are:—Mackenzie, mason work; Little & Sons, joiners; and plumbers, Wood,—all of Kirkcaldy. The cost, exclusive of site, which was the gift of Provost Swan, is estimated at 16,000*l.*

Seacombe.—A new Welsh Presbyterian chapel has been opened at Seacombe. The chapel occupies a site in Liscard-road, near its junction with Victoria-road. The building is cruciform in plan, consisting of nave and transepts, with vestry and necessary lavatories and cloak-rooms, &c., at back. The whole of the external masonry consists of limestone, that for the dressed portion being obtained from the Penmon quarries, near Beaumaris, Anglesey, and the shoddies or ashlars from Craig, Denbigh. The chapel will be heated with hot-water apparatus supplied by Messrs. Bennett, Brothers, Liverpool, who also provided the lightning conductor and finials, and fixed all the gas-piping, &c.; the gas pendants and iron hinges, &c., being supplied by Messrs. Jones & Willis, of Birmingham, from special designs supplied by the architect. The latches and general internal work were supplied by Mr. Doodson, of Manchester. Messrs. Hart, Son, Peard, & Co., of London, supplied the entrance-gates and railings. The whole of the pewing, which is pitch-pine, was entrusted to Messrs. Roberts, Williams, & Co., Liverpool. Mr. Sipping was the plasterer; the carved work being executed by Mr. J. Griffiths and Signor M. Geflowski. Messrs. Forrest & Son, of Lime-street, Liverpool, supplied the glazing, which is of rolled cathedral glass, fixed in lead lights. The clerk of works was Mr. J. Jones, of Egremont; and the whole of the work was carried out under the superintendence of the architect, Mr. R. G. Thomas.

Hastings.—The memorial-stone of a new Congregational church for Hastings has been laid. The site of the church is in the centre of an entirely new district, which is being rapidly built upon. The church is in the Early English style. A tower and spire occupy the south-east corner. Red brick with buff terra-cotta dressings are the materials used. Some land has been secured on the north side of the church for the erection of a school. The architect is Mr. T. Elworthy, of St. Leonard's, and the builders Messrs. C. & E. Harman. The cost of the whole structure will be 5,000*l.*

Buckley.—The foundation-stone of a new Welsh Calvinistic Methodist chapel at Buckley has been laid. The new building will be situate on the road leading from Mold to Buckley, and will be Romanesque in style, carried out in red brick with Ruabon dressed stone facings. Sitting room will be provided for 260 persons. The architect is Mr. Richard Owen, Liverpool, and the contract has been let to Mr. John Williams, of Buckley, for 1,025*l.*

Llanidloes.—The memorial-stones of a new chapel for the service of the Welsh Congregationalists of this town have been laid. The style is Grecian. The contract is for 1,550*l.*, with the materials of the old building. The architect is Mr. J. Humphreys, Swansea; and the builder, Mr. J. Hope Owen, Llanidloes.

Leith.—A new United Presbyterian Church is to be built at Leith. The site is at the corner of Summerside-street and Summerside-place, Bonnington, the front elevation being to the former street. It is designed in the Gothic style. The main building measures 80 ft. by 55 ft., the pointed roof rising to the height of 56 ft., and being surmounted with neat ridge-tiles. A vestry, session-house, and other necessary offices have been provided for. The church will be seated for 700 persons. The estimated cost is 7,000*l.* Mr. Starforth, of Edinburgh, is the architect, and Mr. W. Baxter, of Leith, is the contractor.

Tunstall.—In consequence of the present building belonging to the Congregational body being too small and inconvenient to meet the requirements of the congregation, a new erection has been decided upon. The site will be at the front of the present school chapel in High-street, and the new building will be constructed to seat 450. The cost is estimated at 1,300*l.* The church is to be erected from the designs of Mr. A. R. Wood, architect, Tunstall, the builder being Mr. J. York.

Benfieldside.—The foundation-stone of a new Presbyterian Church and Schools has been laid at Blackhill. The new building is being erected upon a site facing Durham-road, and is to be entirely of stone, faced with fell blockers in thin courses, with a chisel draught at angles instead of quoins. The entrance-porch is to be carried up as a tower, with slated spire, to the height of 70 ft. The side walls have been designed exceptionally low, and in order to break the monotony of the large span roof, a continuous clearstory, with stained glass, is to be formed on the timbers of the roof. The church is to be seated to hold a congregation of 350. Mr. G. Westgarth is the contractor, and the estimated cost is a little over 2,036*l.* The architect is Mr. W. Lister Newcombe.

Milton-next-Sittingbourne.—The new Primitive Methodist Chapel in Church-road, Milton, has been opened. It has been built from the designs of Messrs. Kerridge & Sons, of Wisbeach, by Messrs. Rands & Sons, of the same place. The total cost will probably be about 800*l.*, and the chapel will accommodate 200 persons.

Maidstone.—King-street Congregational Church, Maidstone, has been re-opened, after renovation and decoration under the superintendence of Mr. E. W. Stephens, architect.

SCHOOL BOARD SCHOOLS.

Islington.—New Board-schools have been opened by the School Board for London in Caledonian-road, Islington. The building is in the main road, close to the Cattle-market, and will accommodate 1,150 children. The total cost of the site amounts to 3,534*l.*, and that of the building to 11,010*l.* Mr. E. R. Robson was the architect.

Hemington.—New schools for the Lockington and Hemington School Board have been opened at the latter place. The style is Elizabethan, the architects being Messrs. Giles & Brookhouse, of Derby, and the contract amounted to 1,200*l.* The buildings consist of large school-room, class-rooms, teachers' residence, and out-buildings, with a good play-ground, surrounded by a wall. The schools accommodate ninety children. The late Mr. F. Hood, of Castle Donington, was the builder.

Marylebone.—New Board schools, in Henrietta-street, Marylebone, were opened by Sir Charles Reed on the 15th inst. The following are some statistics as to the buildings:—Area of site, 13,340 square feet; cost of site, 16,184*l.* 16s. 1d.; legal expenses, 517*l.* 11s. 9d.; total, 16,702*l.* 7s. 10d.; cost of building, exclusive of extras, which have to be reported, 8,370*l.*; clerk of works' salary, 104*l.* 10s. 2d.; extras, so far as reported, 1*l.* 10s.; total, 8,491*l.* 0s. 2d.; total cost of site, 16,702*l.* 7s. 10d., and of building, 8,491*l.* 0s. 2d.; making a total of 25,193*l.* 8s. The total cost of site per head is 29*l.* 2s. 11d., and of the building per head, 14*l.* 16s. 4d. The accommodation is,—boys, 181; girls, 188; infants, 204. Mr. E. R. Robson is the architect.

SCHOOL BUILDING NEWS.

Irlams-o'-th'-Height.—The memorial stones have been laid of new Wesleyan schools at Irlams-o'-th'-Height, Pendleton. The architect of the building is Mr. John Cheetham, of Moorside, Swinton, and the contract for the work is let to Mr. Samuel Cheetham, of The Heights, for a sum of 860*l.*

Gainsborough.—It is stated that the managers of the Gainsborough Church schools have under consideration the desirability of re-organising their present buildings, and of adding two new schools to them. For Trinity parish a new school for 200 girls is to be added to the present block, and the infants will take possession of the rooms now tenanted by the girls. The plans of the building have been drawn by Mr. E. Wright, who estimates the cost at about 900*l.*

Water.—The guardians of the poor of the parish of St. Matthew, Bethnal-green, have it in contemplation to improve the water-supply to their workhouse establishment by sinking an artesian well into the chalk basin. Mr. Peggs, C.E., of Westminster, who has carried out the improved water-supply at Shoreditch workhouse, will also carry out the necessary works here.

BUILDING OPERATIONS IN THE FAR NORTH: WICK AND THURSO.

THE *John O'Groat Journal* says that during the past few months a considerable amount of building has been going on in the Wick district, chiefly on the Pulteneytown side of the river. After the completion of the new bridge, and the extensive additions which were made to the manse, the first work was that of a large new workshop, at Janetstown, for Mr. George Forbes, millwright and engineer. Messrs. Reid & Tait were the contractors.

Adjoining the "Wick Agricultural Iron Works" is another house in course of erection, on what is termed the model cottage system, belonging to Mr. Daniel Heury, joiner. In it there will be virtually four houses, two entering from the front, on the ground flat, and two from the back, by an outside stair. It is stated to be the first of the kind which has been erected in Caithness, and follows the model of hundreds of houses put up by the Edinburgh Co-operative Building Society, and also in Prince Albert Buildings, Edinburgh. Mr. D. Miller is the builder.

Mr. Mitchell's new residence, "Gowrie Cottage," is being erected from plans by Mr. Donald Dunbar, architect, Wick. The contractors were Mr. D. Miller, builder; Mr. D. Henry, joiner; Mr. W. Smith, plasterer; and Mr. B. Dunbar, plumber.

St. John's parsonage has been pushed forward by the contractors. It is situated in Moray-street, and is adjoining the chapel. Mr. Donald Dunbar, Wick, is the architect; and Mr. D. Miller, Pulteneytown, the builder; Mr. John Bain, Pulteneytown, joiner; while Mr. B. Dunbar is plumber.

At the Harbour Brae, adjoining the coffee-house, workmen have begun clearing away for the foundation of a building to be erected by Mr. Charles Dunnet, Wick. Mr. Dunnet has also erected extensive stabling from Union-street to River-street.

In connexion with the Hempriggs estate, there has been good work done. A new commodious farmsteading, gamekeeper's house, with kennels attached, has been erected at the Mains, Ackergill. There have also been cottages erected at Reiss, Barnyards, and East Banks.

In Thurso, a new mansion is being erected for Mrs. Smith, of Olrig. It is in the Elizabethan style, the central portion being flanked by side wings. It is stated that the designs were prepared by Major Smith, of Olrig. Contractors,—Mr. Thomas Ross, mason, Castletown; Mr. George Hill, joiner, Castletown; Messrs. Ryrie & Oag, plasterers, Thurso; Messrs. Reid, slaters, Thurso; Mr. Cramond, painter, Thurso; and Mr. Dunbar, plumber, Wick.

Immediately adjoining, and on the face of the same hill as Mrs. Smith's mansion, is Ormlie Lodge, the property of Mr. John Henderson. Ormlie Lodge is built in the Gothic style. The material used is bluestone, faced with Morayshire freestone. The cost will be upwards of 5,000*l.* Mr. James Edgar, late manager of the Forss quarries, and now of Glasgow, was the architect. Contractors,—Mr. George Manson, mason, Murkle; Mr. George Durran, joiner, Thurso; Mr. D. Ross, slater, Thurso; Mr. Scott, painter, Thurso; Mr. James Mercer, plumber, Thurso; and Messrs. Oag & Ryrie, plasterers, Thurso.

Mina Villa, the residence of Mr. W. Reid Tait, is situated on the right hand coming from the station. It consists of sixteen apartments. The style of architecture is pure Gothic. We believe Mr. Ross, of Inverness, was the architect. Contractors,—Mr. John Gunn, mason, Halkirk; Mr. Geo. Durran, joiner, Thurso; Mr. Donald Ross, slater, Thurso; Messrs. Oag & Ryrie, plasterers, Thurso. We believe the contractors for painting and the plumber work were from Inverness, but we did not learn their names.

The new house, erected by Mr. James Brims, is a Gothic erection. The architect is Mr. David Smith, Thurso. Contractors,—Mr. William Munro, mason and slater; Mr. B. Alexander, Thurso, joiner and painter work; Mr. B. Dunbar, Wick, plumber; and Mr. Jas. Smith, Thurso, plasterer.

Mr. Lewis Dunbar has erected a commodious house in Janet-street. It is in the Gothic style. The architect is Mr. Ross, Inverness. Contractors,—Mr. George Manson, mason; Mr. George Durran, joiner; Mr. Donald Doull, plumber; Messrs. Reid, slaters; Mr. Noble, painter; and Messrs. Ryrie and Oag, plasterers,—all of Thurso.

Captain M'Kidd's new house is in the same

street. It is in the Elizabethan style. The stone used is Brora freestone and polished ashlar work. Mr. D. Smith is the architect. Contractors,—Mr. G. Manson, mason; Mr. Durran, joiner and plaster work; and Messrs. Reid, slaters.

Thurso East Castle occupies a prominent position in the landscape. What was the old and original building has been completely removed, and the new structure erected on its site. The original castle was built in the sixteenth century by George, Earl of Caithness, and the sea wing was afterwards added by the late Sir John Sinclair in the year 1833. Mr. David Smith, architect, Thurso, prepared the designs for the modern building. The seaward foundations had to be dug out to a depth of 20 ft., while the portion of the site to the south was founded on the solid rock near the surface. Thurso East Castle has been six years in building. The height of the main tower is 147 ft. from the basement, while the main body of the castle is five stories in height, and surrounded by towers and embattlements, from which magnificent views of the surrounding country and to seaward are to be obtained. Mr. Alex. Swanson, contractor and builder, Thurso, carried out all the arrangements in connexion with the various sections of the work, including the mason, joiner, slater, and plumber contracts.

THE NORTH LONDON COLLEGIATE SCHOOL AND CAMDEN SCHOOL FOR GIRLS.

On Tuesday, the 23rd, two memorial stones were laid, one on each side of the new entrance to the extensive building now in course of erection at Sandall-road, Camden Town, for the North London Collegiate School for Girls.

This school was founded by Miss Buss a quarter of a century ago, and, together with the Camden School in the Prince of Wales's-road, Kentish Town, is still under her management; although both are now carried on under the auspices of trustees appointed under the scheme of the Endowed School Commissioners for the application of certain trust funds in the hands of the Brewers' Company, amounting to some 20,000*l.* In furtherance of the same object, the Clothworkers' Company have given 2,500*l.* towards the cost of the examination-hall,—to be called the "Clothworkers' Hall."

Mrs. Buxton, assisted by Mr. E. N. Buxton, past-master of the Brewers' Company, laid one stone, and Mr. Charles Reynolds, master of the Clothworkers' Company, laid the other,—the architect, Mr. E. C. Robins, F.S.A., presenting a silver trowel to each, with suitable inscriptions engraved upon them.

The old school-house, in Sandall-road, will be partially taken down, and an additional story and a new front will be added to the remainder, while the vacant ground around will be occupied by the new buildings, giving accommodation for 420 pupils. The principle adopted in the classification of the pupils is that of fourteen separate classes, of thirty pupils in each class, with one teacher and assistant to each class. Five of these class-rooms open into the great hall on the ground-floor level, and five on the gallery level.

The hall, 80 ft. by 40 ft., is not only to be used for collective purposes, and for one or both schools on prize-days, &c., but affords space for the withdrawal of pupils from the class-rooms for special teaching as occasion may require. There is a deep gallery at one end of the hall, and a shallow gallery on one side, which also forms the means of access to the second-class rooms on the first-floor level.

Three more class-rooms and the drawing-school are on the second floor of the new building, flanking the hall, but not communicating with it. Single Swedish desks will be used throughout.

The dining-hall, kitchen, and cooking-school, and other domestic offices, are in the basement, as also a spacious cloak-room and conveniences.

Over the Board-room in the old building is the science lecture-room, while the teachers' and music rooms, and servants' dormitories, occupy the remaining upper part of the right wing or raised portion of the present building. The gymnasium, 60 ft. by 25 ft., is situated in the garden in the rear, and is already completed. The warming and ventilation have received attention.

On the completion of the ceremonies, the company adjourned to the Camden School, in Kentish-town, which has been completed and in use for several months, and formally opened that building, which was designed by the same architect.

BUILDERS' BENEVOLENT INSTITUTION.

The thirty-first annual meeting of this Institution was held on Thursday, at Willis's Rooms, St. James's, Mr. Dines in the chair, in the absence of Mr. William Higgs, the president. The annual report (read by the secretary, Major Brutton) congratulated the subscribers to the Institution on the fact that, although the past year had been one of almost general adversity in trade, the income of the Institution had not been diminished. This was especially gratifying in view of the recent increase in the amount of the annuities to pensioners. Six pensioners had been elected during the past year, and, by the new rule, one widow of a pensioner had been placed on the list of annuitants without election. It was a source of much gratification to the committee that they were enabled to recommend that all the candidates (three) presenting themselves in May last should be placed on the funds of the Institution without the trouble and expense of canvassing. The Institution was very much indebted to its president during the past year (Mr. William Higgs). The balance-sheet showed that the total receipts for the year were 2,445*l.* 2s. 2d., and the expenditure (including the purchase of 209*l.* Three per Cent. Consols) 1,773*l.* 7s. 11d., leaving a balance of 671*l.* 14s. 3d. in the hands of the bankers. The report and balance-sheet having been adopted, votes of thanks were accorded to the president, treasurer, trustees, committee, and other officers of the Institution. Mr. Plucknett was re-elected treasurer; Mr. Keeble was asked, and consented, to undertake the duties of honorary secretary to the annual ball; and Mr. Edward Conder was unanimously elected president for the ensuing year. It was announced that the annual dinner had been fixed for Thursday, November 7th next, at the Freemasons' Tavern.

ST. AUGUSTINE'S, SOUTH BERMONDSEY.

On Saturday last the Bishop of Rochester consecrated the chancel and two bays of the nave of St. Augustine's Church, Lynton-road, Bermondsey.*

The portion now completed covers an area of about 80 ft. long by 60 ft. wide. It consists of a chancel of three bays, and two bays of the nave, with north and south aisles. The chancel, in addition to wide aisles on north and south sides, has an ambulatory at the eastern end. The style is Thirteenth-century Gothic of English character, the chancel having a square termination with three arches opening into the ambulatory, and three windows above; that in the centre being of three lights and the sides of two lights.

Owing to the ground on which the church is built being considerably below the level of the road along the north side, and the soil being peat for some depth, it was thought desirable to form a crypt under the whole of the building. A groined ceiling has been constructed of cement concrete at a height of 14 ft. above the crypt, which supports the floor of the church. The chancel is 40 ft. deep and 27 ft. wide; it is vaulted with red brick to a height of 46 ft.; the portions adjoining the western bays of the chancel on the north and south sides are 13 ft. wide, in which seats are placed. The organ, built by Messrs. Bevington, is on the north side, under the tower. The organist's seat is a balcony under the arch opening into the chancel.

The vestries, which are not yet built, will be on the north side of the chancel; that for the clergy will adjoin the chancel aisle; that for the choir will be in the crypt below, reached by the turret-stair, which has concrete steps.

The nave will be 77 ft. long in five bays, 35 ft. high to the wall-plate, with a narthex of 17 ft. wide, and a large porch facing the road. The font, which is of red Dumfries stone, will stand in an octagonal baptistery at the south side of the narthex. The walls are faced with red bricks, with masonry of Bath stone, and red Dumfries stone piers. The nave is the same height and width as the chancel, with aisles, 13 ft. wide and 13 ft. high to the wall-plate. The benches at present accommodating 460 persons are of deal stained black. The church, when finished, will seat 1,000 persons, and all the sittings will be free.

Messrs. Henry Jarvis & Son, of Trinity-square, Southwark, are the architects.

* A view of the Interior of the Church appeared in the *Builder*, on the 1st of January, 1876.

A PERSONAL QUESTION.

At the meeting of the Metropolitan Board of Works, to be held this Friday, the 26th inst., the following report from the Works Committee is to be considered:—

"That, from the facts and circumstances which have come to the knowledge of the committee relative to the past and present interested connexion of Mr. Joseph Storey, the representative at this Board of the parish of St. Luke, with property in that parish required for the Board's Improvement Scheme in Whitecross-street under the Artisans' Dwellings Act, and for the local improvement in Golden-lane, now being carried out by the same Vestry, and to the cost of which the Board have agreed to contribute a moiety; and from the fact that a claim is now before the committee, signed by Mr. Storey and his co-adventurers, demanding a sum of no less than 47,052*l.*, in respect of property in which he is largely interested, the committee are of opinion that Mr. Storey's duties, as a member of the Metropolitan Board of Works, are in complete conflict with the private interests of himself and of his co-adventurers, and that his conduct in relation to the properties in question is calculated to reflect discredit upon local self-government."

THE WORCESTER ARCHÆOLOGICAL SOCIETY AND THE GRAVEYARDS.

Sir,—Reading in the *Builder* the account of the Society's trip to Grafton Flyford, and Flyford Flavel, reminds me of what I saw there and in the neighbourhood last autumn, the primary cause of the wretched state of the graveyard at Flyford Flavel being that there are public paths through it, used by the children going to the National Schools, who soon learn to make use of an open space to play their gambols in. I felt it a pity that such could be the case, and wondered why the parish authorities could not divert the footpaths to either the north or south side of the yard by setting off a width of a couple of yards and placing a wire fence. The same remark as to the thoroughfare applies to Grafton Flyford, where the school-house adjoins the churchyard, and cannot be diverted so well as at Flyford Flavel, but it is in a much better condition. If the society had turned off from here to Huddington, Mr. Noake and his friends would have met a donkey or two, with an alarming appendage, in the churchyard. This is the worst kept one I have ever seen; there are no fences to it, they having been grubbed up by the pigs, as also have been the graves. On the north side I saw a solitary mound; this was thickly studded over with blackberry briars to prevent the pigs poking their noses through.

The church is an interesting old one of various dates, with a chapel on the south side, belonging formerly to the Hall; the north side has a timber porch of Decorated date, the lower part in a ruinous condition, the sides having been rooted up by the pigs. There is no public thoroughfare through it. The cause of this disgraceful state of things is that most of the parishioners are Dissenters. This church is within eight miles of Worcester Cathedral, where so many thousands of pounds have been laid out within the last twenty years. Adjoining the north side of the churchyard are the remains of the Hall,—a beautiful specimen of the Elizabethan style of a half-timbered mansion; the greater part of it has been pulled down, including a chapel. At the back is a magnificent massive chimney-shaft, with various patterns wrought upon it; it is now occupied as a farmhouse. The place has an interest in its having been the residence of Sir Richard Winter, one of the Guy Fawkes conspirators, who was hanged, and possibly from that cause the place became dismantled. A mile farther on is Himbleton, the village of which is an unusually interesting one, consisting of lofty blocks of half-timbered cottages. The church is a good old one. In the yard were some turkeys sitting on their eggs, an unusual thing late in the autumn season. I hope some of your Worcester readers may be induced to have a tramp out about their neighbourhood, and give you an account of their rambles among the churchyards in that county; which, in my own experience, have been the least cared for of any diocese in England. J. B. Watts.

VARIORUM.

"Posts and Telegraphs, with an Account of the Telephone and Phonograph," by William Tegg (Tegg & Co.), is a pleasant, chatty piece of bookmaking, but contains nothing new.——We have received the first volume of *Brief*, a weekly epitome of the Press. Bound thus it becomes a volume to retain and dip into. The Index is full, and presents some original features. The proprietors claim with justice that *Brief* is the only paper in which the news of the week is edited, epitomised, and classified under separate headings.——*Design and Work* improves. It is very cheap, and includes much useful reading for the workshops.——Any one wishing to have a compact account of the proceedings at the late General Conference of Architects, 1878, will find it under the head Sessional Papers 1877-8 (Royal Institute of British Architects), Nos. 14, 15, 16, 17. It is obtainable for a few shillings.

Miscellanea.

The Supervision of the Houses of Parliament.—The *Morning Advertiser*, after denying the truth of some rumours as to the instability of the tower, says:—"Nevertheless, it cannot be denied that in other far lighter and less prominent parts of the buildings, important cracks have appeared, and are still appearing. In what is called the officers' court, there was one most serious fissure and settlement of the stones, which extended through the wing and seemed to make risky the carved archway which gave access from it to the river front. Now this ugly seam has been closed with cement, and we are told that no further movement is to be apprehended. It may be so, but a very recent inspection has shown that two other cracks are developing themselves,—and pretty plainly too,—lower down, and on either side of the great crack which has been stopped above. The key-stones of the arched doorways, too, here and there, show by their gaps that they are loosening in a way which, if not actually threatening, certainly suggests the necessity for careful and skilful watching; and the same may be said of many of the small windows on the ground-floor, which are not of much consequence in themselves beyond that they serve to show what is going on beneath them. Recently a rather serious crack has occurred under the windows of Colonel Carrington's quarters, where the pressure of the stones together has been sufficiently severe to nip the edges off from one, and the pieces now lie on the grass. Yet the river wall, either from its parapet or foundation, shows not the slightest signs of yielding, and while this is so the building which it confines cannot have moved much except towards Westminster. It is a singular fact, however, that where the cracks we have mentioned have occurred, they precisely face the spot on the river terrace where the piles in front of it were drawn out instead of being sawn off, and all would have been treated in the same manner but for the timely and energetic remonstrances of our contemporary the *Builder*. Still, the building just now requires some careful supervision, and this can only be got by the appointment of a competent architect to take charge of it, and see to its wants at regular intervals. There was some such official before Mr. Ayrton came into office as First Commissioner of Works, but he effected a reduction by abolishing the post, and that was sufficient as an economy. Time will show."

The Blackpool Winter Gardens.—These gardens were opened on the 11th of the present month by the Lord Mayor and Sheriffs of London in state. The buildings, of which we have already given a description, are principally of glass, iron, and brick. The glazing is done on the principle patented by Mr. W. E. Rendle, of Westminster, whose glazing may now be found on almost every new building of the kind. The dome of the Winter Gardens is about 120 ft. in height, and has a very light and graceful appearance, and can be seen a long distance out to sea. The principal structure is a glass corridor, extending round the whole of the building, this being also glazed on Rendle's patent system.

Oxhill.—The old Wesleyan chapel at Oxhill, near Banbury, is being enlarged. It will seat 300 persons when finished, and the cost of the alterations will be 400*l*. The contract has been undertaken by Mr. Kingerlee, of Banbury.

A Russian Observatory.—A new magnetic observatory has been opened at Pavlovsk, to serve as an annexe to the Central Physical Observatory of St. Petersburg. The new observatory covers about eight hectares of surface, and the situation is in all respects favourable for the work for which it is intended. The establishment comprises three principal scientific buildings,—the principal building being of stone and surrounded by a terrace for meteorological observations; a double-arched structure in stone covered with earth for observations in magnetic variation; and a wooden pavilion, without a particle of iron, for absolute magnetic measurements and for determinations of time. Besides these three buildings, devoted to the purely scientific work of the observatory, there are four wooden houses for lodging the staff, servants, and other purposes. All these structures are roofed with bitumenized paper, and the scientific buildings are at a sufficient distance from the other buildings to prevent the scientific observations being affected by their neighbourhood. As we have said, the pavilion for absolute magnetic measurements is without a particle of iron; all the metallic parts, locks, and padlocks, keys, doors, and chimneys of stoves, &c., are of copper or brass, and each of these objects has been tested by a particularly sensible magnetometer. The same test has been applied to the limestones of the foundation, the bricks of the stoves, and the chimneys, the granite supports of the instruments, &c. In short, every precaution has been taken, both during the building and after its completion, to prevent a trace of iron getting near it.

City Carlton Club.—The Duke of Richmond, president of the club, has laid the foundation-stone of the new club-house, which is to supersede the present premises in King William-street. After much effort, and fruitless negotiations in other quarters, the committee have succeeded in procuring from the Grocers' Company an eighty years' building lease of a portion of their property, comprising an area of 5,150 ft., situated between St. Swithin's and Sherborne-lanes, close to the present premises. Owing to the leases of the tenants of houses on the property not expiring till 1881, a large sum had to be paid to the occupiers by the committee in the way of compensation, and in order to obtain immediate possession. A contract for the club-house, as designed by Mr. R. Roberts, architect, was entered into by Messrs. Perry & Co., of Bow, the amount for the building being 27,000*l*. The new structure, which will be of stone, is calculated to accommodate nearly 1,200 members. It will contain a spacious coffee-room, 70 ft. long by 26 ft. wide, reading-rooms, two billiard-rooms, a smoking, card, and private dining room. The kitchens will be on the top of the house. There will also be sleeping accommodation for upwards of thirty servants. The sum required for building the club, for compensating the outgoing tenants, and for furnishing, is being raised amongst the members of the club by debentures bearing 5 per cent. interest, and which are the first and only charge upon the property of the club.

Wood-Peeling in Perthshire.—The wood-peeling season in Perthshire has now come to a close. Since the beginning of May the number of persons employed at the stripping of oak and larch bark numbered about 2,000, and consisted of men, women, and children, chiefly Irish. The wages paid to the men ranged from 3s. 6d. to 4s. per day, to women from 2s. to 2s. 6d., to boys and girls from 1s. to 1s. 6d. The wages of wood-peelers have within the last few years been more than doubled, but, on the other hand, the price of bark has lately fallen from 20 to 25 per cent., owing to importations.

Closing of Footpaths.—*Apropos* of Mr. Buckle's letter in our last, we see it stated in the Wiltshire papers that access to "Oliver's Camp," on Roundway Down, near Devizes,—a spot which had been open to the public from time immemorial,—is now sought to be inclosed, iron railings, 4 ft. or 5 ft. high, having been erected round the camp and down the slope of the hill.

Coatham Convalescent Home.—The completed portion of the new Children's Hospital in connexion with the Coatham Convalescent Home has been opened. The plans were prepared by Mr. R. Moore, architect, Coatham, from a design by Mr. Norman Shaw, and the contractor was Mr. J. H. Burton, builder, Coatham. The cost has been 3,000*l*.

The Railway Passenger Duty.—Mr. Rodwell has presented to the House of Commons a petition from seventeen railway companies which pay no dividend to ordinary shareholders, praying: 1. That no duty shall be levied on any fare not exceeding 1d. per mile. 2. That every railway which in any one year pays no dividend to its ordinary shareholders shall be exempted from passenger duty for that year. The petitioners stated that in the year 1876 there were forty companies which paid no dividend on their ordinary shares, and yet during the same year the same companies were obliged to pay in passenger duty 41,574*l*., and in local rates 54,455*l*.

Boulogne Harbour.—The Board of Trade have received, through the Secretary of State for Foreign Affairs, a copy of a recent French law authorising the making of a deep-water harbour at Boulogne. The proposed works are to be undertaken at the public expense. The estimated cost is 17,000,000 francs, towards which the Chamber of Commerce at Boulogne is to contribute annually the sum of 100,000 francs for fifteen years.

Public Parks for the Provinces.—The Corporation of Winchester have received permission to borrow 1,250*l*., to purchase and fence the ground on St. Giles's Hill for a public park.——The Mayor of Derby has received a communication from the Duke of Devonshire, in which he requests that his name may be added to the list of contributors, for 500*l*., to the fund for the purchase of the Derwent Bank Estate.

Offensive Businesses.—The *London Gazette* has published an order made by the Metropolitan Board of Works, under the provision of the Slaughter-houses, &c. (Metropolis), Act, 1874, confirmed by the Local Government Board, declaring the business of a fat-melter or fat-extractor, "that is to say, any business in which fat is melted, rendered, extracted from any material, or remelted," to be an offensive business.

An ancient British Sepulchral or Cinerary Urn, containing burnt bones and wood, has just been dug up in the churchyard of Shaw-cum-Donnington, near Newbury; but, unfortunately, it was much broken in removal. As near as can be ascertained, it was fully 18 in. high. It is ornamented with the usual herring-bone or zigzag lines, and has a central band formed by impressed thumb-marks.

Home for Little Boys Farningham-road, Kent.—A block of buildings for stores, workshop, reading-rooms, &c., was opened on Saturday, 6th instant, by the Countess of Zetland, and the foundation-stone of an additional house was laid by Mrs. Horniman on behalf of the donor. Messrs. Spalding & Evans are the architects, and the contractors W. Downs & Co., of Southwark.

TENDERS

For north block of building for the Governors of the Leys Schools, Cambridge. Mr. Robt. Curwen, architect. Quantities supplied by Mr. J. S. Alder:—

Stephens & Bastow	£9,699 0 0
L. H. & R. Roberts	9,558 0 0
Brass	9,480 0 0
Dove, Bros.	9,350 0 0
S. & W. Pattinson (accepted)	9,200 0 0

For alterations and additions at warehouses, Satchwell-street, Bethnal-green, for Mr. James Hately:—

Barrow (accepted)	£850 0 0

For detached house at Grove Park, for Mr. C. N. May. Mr. G. Sherrin, architect:—

Staines & Son (accepted)	£1,650 0 0

For alterations and additions to Grove Chapel, Camberwell. Mr. Alfred R. Pite, architect:—

Allen & Son	£1,690 0 0
Turner & Son	1,500 0 0
Smith	1,396 0 0
Falkner (accepted)	1,285 0 0

For billiard-room for Mr. J. MacAndrew, Mill-hill. Mr. Alfred R. Pite, architect:—

Boden (accepted)	£488 0 0

For new chancel aisle, vestry, and other alterations to east end of Upton Church, Essex. Mr. George McDonell, architect:—

Gibbons (accepted)	£1,040 0 0

For alterations and bar-fittings to "The Bell," Basinghall-street, for Mr. Lawrence. Mr. Henry R. Cotton, architect:—

Anley	£795 0 0
Toms (accepted)	778 0 0